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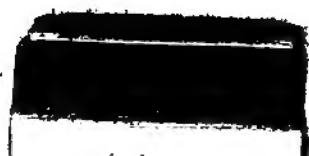
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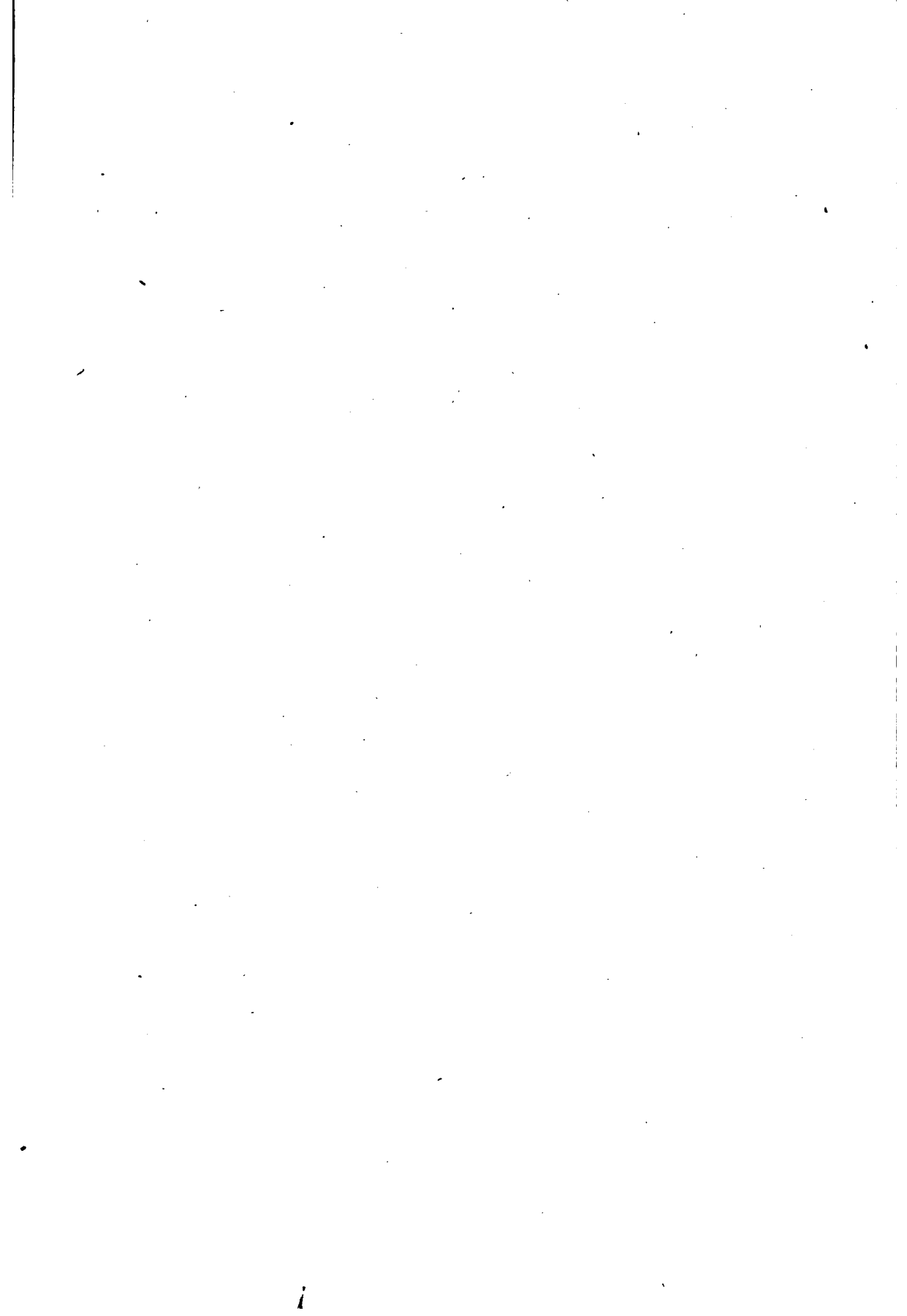
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American
Amateur Photographer

VOLUME XVII.

JANUARY - DECEMBER, 1905

Edited by

DR. JOHN NICOL

FREDERICK C. BEACH

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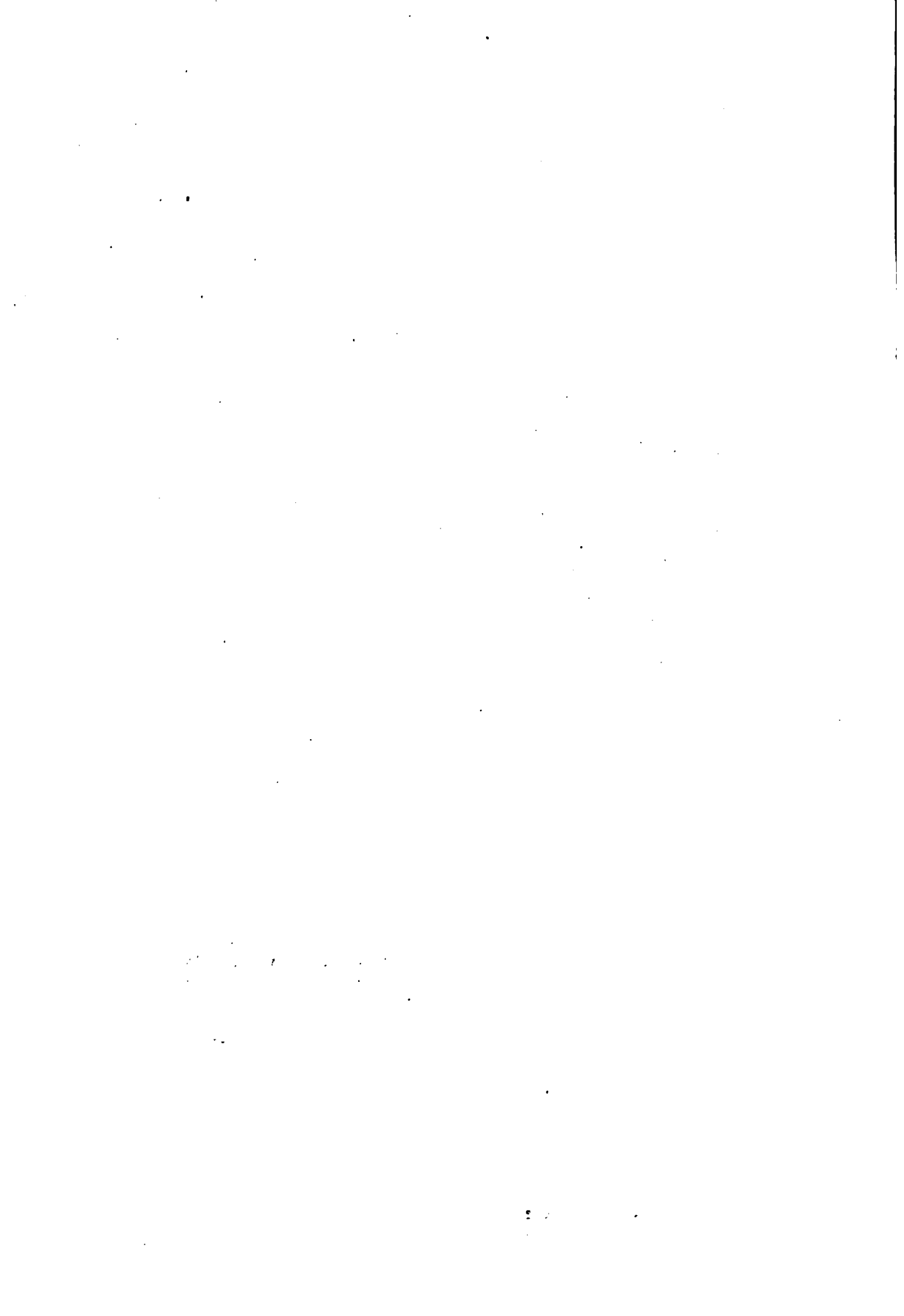
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MASTER OF THE HOUNDS.



P. G. Farquharson.
First Salon of the Salon Club of America

THE
AMERICAN AMATEUR PHOTOGRAPHER.

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NO 1

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LOOKING BOTH WAYS.

BY the time this reaches the eye of our readers we shall have arrived at another of the annual milestones of our journey through life and have finished another volume of the magazine that has occupied most of our thoughts for nine long years. Having many to please, it is hardly possible to please all; but while we have had a few complaints and fault-findings we have had many congratulations and expressions of appreciation. And we wish we had more of both, as the one induces us to "take a thought and (where we consider it necessary) mend;" while the other encourages and stimulates to, if possible, do still better.

But the looking back now should not extend beyond the year that is about to close, and on the whole there is not much progress to record. While no great discovery has been made the discoveries and improvements of previous years have been more generally used, and the advantage of long focus lenses, orthochromatic plates, development by time, and the necessity for sufficient exposure have been gener-

ally recognized and put into practice. 1904 may be said to have been a year, not of lying on our oars, but of which the progress was confined to an appreciation and more general use of much that had been practically neglected; although it should be memorable for one great thing, the introduction by Bausch & Lomb of a portrait lens with a working aperture of $f/2.2$. Just think of it, although it seems hardly thinkable, a lens of $14\frac{1}{2}$ in. focus and a diameter of not much less than seven inches. No wonder that it costs \$500; the wonder is that it can be made at any price.

The year should not be dismissed without some notice of the advent of the "American Federation of Photographic Societies" and "The First American Photographic Salon," but politics and personalities have been so mixed up with them that we hardly care to enter the lists. To both we wish all the success they deserve, and hope that whatever mistakes may have been made or ungenerous words said will be forgotten and all work together for the common cause, the

advancement of photography. As we write before the Salon has opened its doors we do not know what will be the result or the opinion of those who have pictorial photography most at heart, but we are especially interested in it because of the jury. Our readers know that, contrary to most pictorialists perhaps, we have always favored a jury of artists rather than of photographers, and this seems a favorable opportunity for showing whether we are right or wrong.

But it is better to look before than behind. The past may be tainted with regret, but the page of the future is still clean, and he that has faith in himself may resolve with something like confidence to keep it so. The time for looking forward is also the time for promise, and while we have nothing new in view, we believe in the saying that "not to progress is to retrograde," we have resolved that whatsoever has been well done in the years that are past shall be better done in the year that is to come. Already we have secured the aid of several of our readers, but we want help from many more. The payment, even the prompt payment of the fee which places your name on our roll of honor, our subscription list, does not by any means discharge your obligation either to us or your fellow photographers. You and your interests are in our thoughts during most of our waking hours, and for all of photography you know you are indebted to those fellows both past and present, and the least you can do is to hand on anything you come across for their benefit.

He must be dull indeed who can do much in photography without meet-

ing with something unusual or that he does not quite understand, or devising some dodge or what he thinks an improvement on the usual methods; and he should consider it both a duty and a pleasure to give it us for the benefit of all. Never mind how it may be "set down," the only condition is that you shall write on only one side of the paper, and write as plainly as you can, our eyes not being quite as good as they were half a century ago. We shall put it into shape, and if you have the proper spirit you will be proud to see *your* idea sent throughout the length and breadth of this and other lands.

Do not think, however, that we mean to belittle the subscription part of the business; the publishers know how important it is, the mainspring that keeps the machine going. Renew it promptly and say to other of your photographing friends all the good things you have said to us. Give us likely names to whom we can send sample copies, and in every possible way help us to add to the honor list, assured that it shall be casting your bread on the waters to be returned after (not) many days. In other words: the AMERICAN AMATEUR PHOTOGRAPHER is not a money making speculation, but so far as we at least are concerned, a means of promoting the progress of photography in all its phases, and therefore the more that comes in the better will the magazine be made.

In the hope that all will do our best to make the AMERICAN AMATEUR PHOTOGRAPHER the best of its kind we begin the work of the year with confidence and wish you all a Happy New Year.

ON GIVING VALUE TO A PHOTOGRAPH.

ONLY a Photograph" is the common expression and commoner feeling of "The man on the street" as he looks over, say, the catalogue of the First American Photographic Salon and finds prints priced at from \$50 down, \$25 being quite a common figure. This tendency to belittle the value of a photograph arises mainly, no doubt, from the knowledge that a practically unlimited number of duplicates may be produced and a belief in the simplicity of the printing method, although those who have read our account of how Hinton produced his Salon print of Niagara will have their doubts as to that.

Our attention has been directed to this subject by an article in *The Amateur Photographer* in which A. J. Anderson gives some excellent advice as to a method of vastly increasing the value of photographic pictures, such as are shown in the salons and exhibitions. His suggestion, in short, is that photographers should deal with their pictures as engravers frequently do with their plates, print only a limited quantity and then destroy the negative. He suggests three courses that the photographer may adopt, depending on the nature of the picture. A small issue and a large price, a greater number with a medium price; and an unlimited edition at the lowest figure.

According to this scheme the prints,—it being taken for granted that they were by one or other of the two permanent printing methods, platinum or one of the varieties of carbon includ-

ing gum-bichromate; would bear the registration mark and number of copies to be printed. Thus, 186, Portrait of ———— three copies printed, one for sale, price \$100. 196, The Children of the Mist, 12 copies for sale, \$50. 237, Harvest Home, unlimited edition, price \$1.50. The copies would be numbered and signed, and those of the smaller editions kept track of; and the time would come when, at public sale photographs that had originally cost, say \$50 would go up to several hundreds because only one or two were in existence, while one at the same original price but of which a larger number had been printed, went for ten dollars.

It is true that under the present conditions photographs have found buyers at \$50, but they are few and far between; and even at the more modest \$25 they are not numerous, nor is the reason far to seek. However honest the photographer may be who undertakes to limit the issue of any particular picture, he is as liable to die as are his neighbors, and the negative coming into other hands, a buyer hardly cares to pay so much for a print that may in a year be on the market in hundreds for a couple of dollars or even half that price.

Our suggestion is that a number of our leading pictorialists should meet and endeavor to bring about a limited edition and destruction of the negative condition of things. Something in the nature of a chartered association with a registrar whose stamp would be official and command confidence, and who would effect such reg-

istration only on the affidavit of the author both as to the number printed and the destruction of the negative thereafter. Such registrar in addition to registering the pictures could keep track of the smaller editions so that each could be traced from sale to sale, collectors knowing where every copy could be found, each proud in the possession of one or more of the works of his favorite authors.

Of course, such an officer would cost something, but he would be sup-

ported by registration fees, which, with such numbers of true picture makers as the system would evolve, need not be large. We give the suggestions for what they are worth, recommending them to the attention of the Photo-Secession, The Salon Club of America; or other body sufficiently interested in the giving to pictorial photography its true place in the picture buying world and creating a value they cannot reach in any other way.

ST. ANNE'S DAY.

Walter Zimmermann.
First Salon of the Salon Club of America.

THE FIRST AMERICAN PHOTOGRAPHIC SALON.

BY WALTER ZIMMERMAN.

What is a pictorial photograph?

It is one which produces such an effect upon the imagination as a painter might obtain by means of his brush and canvas.

Upon this question and answer hang the success or failure of the famous jury of painters in its selection of picture-photographs for the First American Photographic Salon.

Stated more simply; Did the great jury judge the photographs submitted to them as *photographs* or as *pictures*?

After a careful study of the selections by the jury, as hung, the writer is of the opinion that the jury performed its heavy task from a photographic, rather than from a pictorial standpoint. If I am right in this opinion, then the jury gave its time and effort in vain, for photographers are infinitely better judges as to that which constitutes a good photograph than painters are. This expression is made most reluctantly, as the jury received no compensation other than the slight pleasure, in this instance, of laboring for the love of art.

It is thoroughly well understood by this time that the jury threw out all pictures submitted, which, in their judgment, appeared to have been produced by photography *with the aid of the hand*. In other words, it laid down a code of morality for the pictorial photographer, limiting him strictly to the use of the lens, plate and paper. It was an ethical, rather than an esthetic distinction. The result of this was, that, while there

really are many pictorial photographs of the very highest order, appearing on the walls, there are also many photographs which are not even remotely pictorial, and of these there are some which are, unhappily, not even good photographs. The jury was not expected to be composed of judges of technical excellence in photography, but it is, notwithstanding the great unevenness of its selections, undoubtedly composed of judges of the very highest rank, as to that which is and that which is not pictorial.

The limitation by the jury to selections purely photographic is freely stated, and it was the decision of the jury itself that the judging should be done on that basis. This limitation, which came as a great surprise to those who were interested in the success of the Salon, was a great triumph for those who advocate straight photography, and, on the other hand, caused the exclusion of much that was most valuable in the way of art as applied to photography.

The question as to the right of the pictorial photographer to "manipulate" the negative and the printing medium has been much discussed, *pro* and *con*, of late, and while the writer has not yet hitherto expressed himself on the subject, he nevertheless, believes that the future of pictorialism in photography depends upon his right to make such modifications in the negative as may produce the artistic effect which he strives for, and which cannot, ex-

cept in rare instances, be produced by the aid of the lens alone. I will go still further and say that it is the human touch which gives the final effect which constitutes the value of the pictorial photograph.

Now at this great Salon, if all of the work so performed was cast aside, the value of the exhibition, pictorially, was thereby lessened to a very considerable degree. I am of the opinion that the jury was most conscientious in its decision on this important question, in reserving the right to use the brush and pencil exclusively for the artists in those media, and compelling the photo-pictorialist to restrict himself to his own implements.

However conscientious the jury was, as I believe, in its decisions, it nevertheless made a number of errors in carrying out its own principles, for it included some work which was neither pictorial nor good photography and it included much that was manipulated, although not evidently so. I shall not, of course, point out, invidiously, any of these specimens, on either side, but can safely say that three out of the four selections of the work of the writer were considerably modified, and necessarily, in order to make them worthy of being hung in this or any salon. On the other hand, I was told that my rejected work had been laid aside on account of the jury having discovered certain modifications. The fact was that there was more "improving" done on the accepted than on the rejected work. The prints themselves were, however, in carbon, and unretouched. The "rejects" were things which had had a pretty general acceptance at previous salons. Let it not be supposed that I

am airing any grievances, for I think that four entries in my name were plenty; and I, individually, am only too glad to abide by the rulings of the jury. I simply am using my own experience as the only one which I am at liberty to mention, as an illustration of the principles referred to.

The evident irregularity of the Salon, as hung, must be explained in some way, and the suggestions which I am making seem to be the logical reasons.

It is the duty of the jury in an art-salon to accept all of the good, and to reject all of the bad, if it knows how to do so, and I still feel no doubt that the jury did and does know how to discriminate, in art, but, probably, not in photography, pure and simple.

In behalf of the Salon I will say that if any three photo-pictorialists, the hanging committee, for instance, might have had the privilege of excluding one hundred photographs, the Salon, with three hundred, instead of four hundred, frames, would be one of unequalled distinction. It is a pity that it is necessary to make excuses of any kind as to the remaining one hundred entries. It is also a "cry of spilt milk" to suggest that there may be, among the "rejects" a sufficient number of good things, even if more or less manipulated, to constitute a first-class photographic salon, and it would be a most interesting thing, if it were possible, to get a photo-pictorialist jury to try its hand upon those eight or nine thousand discards, with the chance of getting out something fully equal to the Salon itself, as to quality in a purely artistic sense.

In selecting the best things at any art-exhibition, one naturally acts ac-

HOW MANY LOVERS?

Harry Stacy Benton.
First Salon of the Salon Club of America.

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1 1/2 1/2 1/2 1/2

cording to his own individual taste, and if I were asked to pick out a lot of pictures from the First American Salon which I would like very much indeed to own, my selections of the first thirty or thereabouts, would be as follows, the order being that of the catalogue:

Number 8; Laura Adams Armer; "The Laurels," in which the pictorial value appears to me to be unconscious or even unintentional, and, being the only exhibit of this artist, it is impossible to know her artistic conceptions except from the print before us. It represents a solitary standing figure of a woman, in a graceful pose, with the tall trees, presumably laurel, as the background. The foreground is exceedingly uninteresting, but the suggestion of solitariness conveyed by the single figure with its gloomy background is highly mystical.

Numbers 16, 19 and 21; Curtis Bell. "Fog Clearing Away" is one of the most perfect representations of the lifting of fog from the water that I have ever seen, either by photographic or any other means. "Threatening Weather" is also a fine atmospheric picture, with perfect clouds and pleasing landscape. "Jackstraws" is a successful 'genre' effort, both pictorially and photographically.

Numbers 23, 26 and 27; Mrs. Jeanne E. Bennett. I mention but three, but, frankly, would like to own a copy of everything that Mrs. Bennett produces. "La Reveuse," (the dreamer) and "Meditation" convey the religious sentiment in which Mrs. Bennett is pre-eminently successful, and "Petite Marie" is a simple and charming portrait study of a little peasant girl.

Number 35; Harry Stacy Benton; "How Many Lovers?" is a fine poster effect on brush-developed platinum paper, with the face a little bit too dark, perhaps, but otherwise a charming picture, an original effect with an old theme.

Numbers 47 and 48; Miss Fedora E. D. Brown. "The Water Way" is a most pleasing effect in steam and smoke, with lake steamers as subjects. "An Old-Fashioned Girl" is one of the most thoroughly charming portrait studies in the Salon, and is perfection in photographic-pictorialism.

Number 61; William Clayden, England. "A Gleam of Light" tells its own story in light and shade effects.

Number 69; Allen Drew Cook; "Portrait Artist" is an enlargement, probably the largest frame in the Salon, the face being suggestive of a Dante, and the head admirably posed.

Wendell G. Corthell has six frames, 75-80, nearly all of them landscapes. He has a fine appreciation of the beauties of nature and his technique is good.

Number 90; John Dolman; "The Landing" is an unpretentious "gum" print of a water scene, with pleasing reflections of the masts of a sloop.

Number, 93; Clarence G. Dudley; "Approach of a Winter Evening" is a perfectly rendered snow effect.

Numbers 99 and 101; Rudolf Eickemeyer, Jr.; "Fleur de Lys" is an exquisite landscape with flowers in the foreground, and "A Summer Sea" is a fine rendering of a beach, with its waves, and a disc for sun excellently inserted in the negative.

Number 107; J. H. Field; "The

GROUP OF FRUIT

John W. Schuler.
First Salon of the Salon Club of America.

7

WINTER EVENING.

Osborne I. Yellott.
First Salon of the Salon Club of America.

Top Spinner" a boy with top, delicately rendered in Mr. Field's well-known style.

Numbers 111 and 112; Louis Fleckenstein; "The Water Supply," badly named, is a fine landscape, with evening effect, a pool at the front and a house in the distance, with soft tones, one of the best things in the Salon; "An Impromptu Clog" represents two girls dancing, produced in warm platinum, from a large plate, the life and motion depicted in a manner unusual in photography.

Number 127; Solon L. Gates; "Portrait, Rev. F. L. Patton," is one of several fine portrait studies shown by Mr. Gates.

Number 137; "Rough and Ready" which might be entitled "Just Boy" is a pleasing study, very much better rendered than when first shown by Mr. Hall.

Number 143; R. J. Hillier; "Harvesting" is a well rendered pastoral scene with an approaching storm added to the original negative.

Number 148; George F. Holman; "An Oregon Wild Duck Lake" is a fine and varied landscape, perhaps too much crowded, but finely rendered in carbon.

Number 118; Frank Roy Fraprie; "The Brook in Winter" is a good snow and water effect, but too harsh in its tones.

Number 195; David Blount, England; "Their Ever Moving Home" is a particularly good thing, showing a gypsy wagon by night, with the light gleaming from the interior.

Numbers 205 and 206; Misses W. and G. Parrish; "Babbie, the Egyptian," and "Babbie," are two fine poses of the same head, one pensive

and the other smiling, one in black and the other in warm sepia platinum. Few pictures in the collection show more true artistic perception and simplicity than these.

Numbers 211, 212 and 214; Adolph Petzold; "A Winter Landscape," "A January Thaw" and "Landscape" selected from the gum prints of this fine worker.

Number 222; W. H. Porterfield; "The Day is Done" is an effect in light and shade purely, in which there is little detail to arrest the attention, but the effect is well conveyed, and highly pictorial.

Number 231; Carl Rau; "The Swimming Hole" is a good genre picture, the print, unfortunately, showing deterioration, so that it will, probably, have to be replaced by Mr. Rau.

Number 275; Carle E. Semon; "Fantasy" is a head study in Mr. Semon's mysterious style.

Number 296; J. C. Strauss; "Portrait of Mrs. Newman" is a well rendered study by this distinguished portraitist.

Number 311; Charles E. Townsend; "Yosemite in Storm" is an unusual thing, showing the Yosemite scenery, with perfect rendering as to the storm, but objectionably balanced by the part below a diagonal line being nearly black and the remainder quite light. The scene selected could not, of course, have been otherwise correctly rendered, I suppose.

Number 315; Emilie Wagner; "Study of a Child" is a poster effect in straight black and white, without half-tones.

Number 315a; Arthur W. Walburn, England; "A Bit of Old York" is an interesting view among the tottering

AN AFRICAN.

Geo. H. Beely,
First Salon of the Salon Club of America,

timber houses of old England, perhaps needlessly sharp in detail, but highly picturesque.

Number 331; Osborne I. Yellott; "Over the Hill" in blue carbon, is one of the best pictures, and is "The House on the Hill" of the last Philadelphia Salon.

Number 346; A. H. Stoiber, of Paris; "Venice on the Horizon" is a decidedly Turner-esque effect, well rendered, in which, however, the limitation of photography as to color is unusually apparent. Mr. Stoiber is an American, permanently residing in Paris, who rarely misses American salons.

The most prominent single exhibit in the collection is that of George H. Seeley, an entirely new man in pictorial photography. He shows twelve prints mounted in immense white passepartouts. While I recognize Mr. Seeley as having artistic feeling and perception, his mode of expression is, to me, so radically objectionable as to cause surprise at the large acceptance of his work. His method is to have his negative totally out of focus, that is to say, with no pretense whatever as to focus, and to have it extremely underdeveloped, so that it would probably look like plain glass, and to print it on very ancient black platinum paper, very dark, so that his tones are the lowest of the low. The "picture" so obtained is mounted on a sheet of white paper, five times the size of the print and fastened with white gummed paper. The contrast between the deep black prints, devoid of detail, and the glaring white of the big mounts robs the prints, in my opinion, of whatever merit they might possess. All of the twelve prints are printed

and mounted in the same manner, and the effect of this collection is unspeakably dreary. It is chronic melancholia worked to its furthest limit, and the collection surpasses in gloomy ferocity anything in the way of out and out fuzziness ever shown at any photographic salon. The word "fuzziness" is much too mild, and a new appellation will have to be invented to describe this collection. Nevertheless, I do not doubt that these things will have a certain popularity for a time.

It is a positive pleasure to turn from works of gloom to the warm, sunny, pleasing pictures shown by Mrs. Jeanne E. Bennett, who has eleven entries in the Salon. She depicts scenes of peace and joy, and sane, natural emotions, and is unsurpassed, as a genre pictorialist, in the country. Her pictures tell their story at a glance, and are principally scenes in peasant life, and those in which the fine devotional element is predominant. Her absence of vanity is shown by her modest, closely cut frames, and her love of joyful effects is evident in her uniform choice of warm, sepia tones.

Another large exhibitor is Curtis Bell, the organizer of the Salon, who modestly withdrew several of the pictures which had been chosen by the jury. His work shows wonderfully rapid advancement in tone and expression, to such an extent that I failed to recognize it, except by the aid of the catalogue. He shows landscapes, principally, but can, at times, produce excellent genres.

Another photo-pictorialist whose work shows great advance in skill and in artistic perception is Louis Fleckenstein, Director of the Salon Club of

LANDSCAPE.

C. M. Shipman.
First Salon of the Salon Club of America.

2 3 4 5 6
7 8 9 10 11

America. A year ago comments in regard to his pictures were largely critical, on account of the highly "posed" air of his subjects. His prints, as hung in this Salon, are artistic and convincing, and excellently rendered as to technique.

Rudolf Eickemeyer, Jr., is too well known to require comment on my part. He shows ten frames, with pictures faultless as to technique, and nearly all of them perfect as to composition.

Alfredo Ornano, of Genoa, Italy, shows six studies in Italian life, of which his "Danza Crepuscolare," (Evening Dance) is a very remarkable effect in lighting.

Adolph Petzold shows seven delicate gum-bichromates, in which art he is a master, a class by himself.

The twelve pictures by the late H. P. Robinson had not, at the time of the exhibition in New York, been received from the custom house, although listed in the catalogue.

Osborne I. Yellott has eleven entries, principally rendered in blue carbon, with several night effects of the Capitol at Washington, well rendered except as to the large white haloes caused by the electric lights. If he

considered it best to have those reduced, their value in a pictorial way would, I believe, be greatly enhanced.

My own "Saint Anne's Day" is from an 18 x 22 plate, enlarged from a Kodak film, and represents the interior of a church at Auray, France, at the time of the "pardon," which takes place annually on Saint Anne's Day, July 25th. It may, perhaps, not be apparent, but the large negative was considerably manipulated, in order to dispose of the motion of nearly all of the people, with their white, Breton caps, during the forty seconds exposure of the original film. I have also two studies and one landscape, the latter, hitherto, a "reject" at every salon.

From New York City, the Salon exhibition is to go to nearly all of the principal cities of the United States, and to Toronto, Canada. In other words, it will be in the charge of all of the Salon organizations belonging to the American Federation of Photographic Societies. Other cities have been more fortunate than New York, in having secured their permanent art academies as the places at which the Salon is to be held.

WORDS FROM THE WATCH-TOWER.

BY WATCHMAN.

I have more than once in these pages doubted the correctness of the statements regarding the alleged speeds of shutters when they go up to parts of a thousand, and, of course, am glad when I come across anything

like corroboration of my opinions. *Nature* in its October 20th number discusses the question, reproducing Beldam's photograph of driving a golf ball, taken, or alleged to have been taken in the 1-1,000th of a sec-

ond, and thereby proving that the ball left the club with a speed of 900 feet per second, a rate which as an old golf player I should say was simply nonsense. Better, however, than any saying of mine, comes Professor Tait, whose calculations no one will doubt, with the proof that the fastest ball does not go faster than 400 feet. The conclusion of the matter is this, that Beldam's shutter was going at a little less than half the speed that he expected.

* * *

THE AWARDS AT THE ST. LOUIS EXPOSITION.—Our British contemporaries are getting a lot of fun over the awards at the St. Louis Exposition, and not without reason. Here follows one of the notices in *Photography*, one of the mildest, too, although some of those that are hit may think otherwise.

"On another page we give the list of those who have received awards at St. Louis. A week or two back one of our American photographic contemporaries chronicled the fact that every United States exhibitor received an award. Great Britain has not been so fortunate, and almost twenty-five per cent. of those Britons who responded to the invitation have been passed in silent contempt. This is hardly the way to foster an Anglo-Saxon Union. We feel that those who have been so unfortunate as to miss the distinction of being unmedalled have a legitimate cause of complaint in that they were stowed away, lock, stock and barrel, with the second rate American exhibitors, who alone supported the show.

Perhaps the better way of treating such a fiasco is to give the list of those

who have *not* received awards. They are as follows:

W. Crooke, Dr. T. G. Crump, H. E. Davis, Charles H. L. Emanuel, J. M. C. Grove, Harold Holcroft, E. T. Holding, C. F. Inston, Furley Lewis, Ernest Marriage, Baron de Meyer, Hector E. Murchison, The late H. P. Robinson, E. Sanger Shepherd, Agnes B. Warburg, Percy G. R. Wright.

* * *

Omitting one or two nonentities, whom somehow the jury seem unaccountably to have overlooked, we think that our readers will feel as we do, that it is at least as great a distinction to figure in the list we give above, as it is to be one of those to whom a jury, almost unknown, has given an award. In fact, if we take away the scientific exhibitors, although even here the medalling has been quite promiscuous, the much vaunted St. Louis Photographic Exhibition awards seem to be about up to the level of one of those excellent but unimportant competitions by which our elementary contemporaries seek to extend their popularity amongst those who are just commencing to use the camera.

All said and done, when we remember, if we can remember, the names of those who formed a majority of the jury—we do not refer either to the British or French jurors—what more can one expect?

* * *

I have more than once drawn attention to the methods of the "solgram" man; not his method of color picture making, for in that so far as he has shown, there is nothing new; but his notions regarding the role played by colors and his deal-

ings with the work of those who have gone before him; and as Cosmos, in *The British Journal of Photography*, goes over that ground better than ever I could, I have pleasure in quoting him as follows:

The erudite Mr. South, who had a display of "photographs in natural colours" at St. Louis (I quote his own description), is not kind to the various systems which antedate his own somewhat ambiguous and mystical method. Mark him: "So far as negatives for producing color photographs are concerned, every desirable quality has been obtained. But, as I have said, we have no color photographs. If this is true, then what have we? Why, we have tri-color photo-engravings, the pictures from which cannot be produced without excellent printing presses and equally excellent printers. We have lantern slides and color transparencies, which are beautiful, but they are not photographs. We have physical prints from dyed or stained positives, which are not permanent, and are mussy and dirty things to handle, and they are not photographs when finished. Now and then a photographic print is made by superposing three carbon prints or by fading out unstable dyes, but such methods are not of any commercially practical use." Will someone explain to me why it is that whenever your half-educated dabbler in color photography "invents" some empirically mongrel process of making tinted prints he must go out of his way to show his ignorance of the main subject by passing wholly absurd and irrational comments on the work of those who have preceded him? If a trichromatic transparency is not a

photograph, Mr. South, what on earth is it?

* * *

IS THE PICTURE POSTCARD DOOMED? If all be true that comes from Vienna it is; and instead of a picture you are to drop a nickel in the slot, say anything you like to your correspondent, and send a phonographic record of your voice. An about-to-be millionaire has invented a substance similar to the ordinary postcard, soft enough to be impressed by the stylus yet tough enough to pass through the post without injury. Another nickel in another slot and Cecillia may hear the very voice of her charmer, or if she prefers it in the privacy of her chamber, she may get for two dollars a new translating phonograph through which she can hear it all the day long if she likes.

* * *

WEAK DEVELOPERS.—I have always advised going slow, and am glad to find the advice supported by such a well known pictorialist as Horsley Hinton. Here is what he says:

"The dilution of the developer, whatsoever the subject may be, is one of the most useful pieces of advice I have to give, for it is a curious fact that nearly all the plate and film makers' printed formulæ, excellent as they are in every other respect, seem to underdo the proportion of that very simple ingredient—water. I know plate makers who are themselves photographers who invariably use their own formulæ *plus* a quantity of water. Why the formulæ, then, are so published is more than I can tell, but it does not matter so long as you bear in mind to *double* the quantity of water recommended."

A TIP FOR BROMIDE PRINTING.—The following, from the same source, should be of interest to bromide printers, and we know its value, having practised something in the same line for years; getting the idea from a German who introduced three brands of paper for three different classes of negatives, the only difference being charged with varying quantities of a bichromate.

Hard negatives seldom give good prints on bromide paper. A soft, delicate negative is best for bromide paper, but sometimes it is necessary to make bromide prints from negatives that are more suitable for carbon work, for instance. In such cases the following procedure is to be recommended. It is far easier than it sounds, and the resulting prints are soft and rich without any tendency to flatness. Expose the paper behind the negative sufficiently long for the light to penetrate the most dense portions, then instead of soaking the paper in water, preparatory to developing it, place the exposed sheet in a weak solution of potassium bichromate for a minute or so. A half per cent. solution is about the right strength (24 grains pot. bichromate to 10 ounces of water). If the negative is a very hard one, the soaking should last about three minutes, but in ordinary cases about a minute or a minute and a half will be ample. At the end of this time wash the paper in several changes of water and then develop in the ordinary way. The developing action will be slower than usual, but it will be found that the shadow details do not become clogged and dense

before the high lights are sufficiently developed, and the finished print will more than justify the slight extra trouble. Don't have the bichromate bath too strong or the shadows will be restrained to such an extent that the print will be useless. As a matter of fact, the solution can be even weaker than we have indicated if it is thought desirable.

* * *

It is never too late to mend, and we congratulate *The Photographic Times* on the abbreviating of its more recently cumbersome title and its promise to turn over a new leaf in connection with a movement deservedly appreciated wherever pictorial photography has gained a footing.

Different roads often lead to the same goal, and it takes a good deal of egotism, in most cases at least, to say that one is better than all others.

Here is what it says, and I wonder how many of its contemporaries who sailed in the same boat will have the honesty to follow the good example:

"We are all liable to error; we are all influenced by different motives and view things from widely different standpoints and consequently in arriving at conclusions, we feel that others, perfectly honest and sincere though they may be, are decidedly in the wrong.

Though not in sympathy with the Photo-Secession as at present conducted, we will hereafter refrain from any useless discussion of issues that never can be reconciled, and will devote our energies toward the dignified advancement of pictorial photography."

NOTES.

RECOGNITION AT LAST—Those who have long struggled for the recognition of photography as a means of artistic expression will be glad to know that there are at present on the walls of the Paris "Salon d'Automne," one of the chief recognized Painters' Exhibitions of that city, fourteen photographs, thirteen by Frenchmen and one by an Englishman. This is the thin edge of the wedge, to be followed, we hope, by a general recognition; as we cannot see any reason why photography as a means of expression should not be admitted as well as are the other methods:

But we *should* like to see those fourteen pictures, and if the Photo-Secession *could* only get them and send them round the country their educational influence would be immense.

THE SCOTTISH FEDERATION OF PHOTOGRAPHIC SOCIETIES have some things that might with benefit be adopted by Federations on this side. One is the publication of a kind of gazetteer giving information regarding the more picturesque parts of the country, where there are dark rooms at the disposal of the members, and, and this more especially, where there are "reporters" willing to give all necessary information, and occasionally act as guides to the more inaccessible parts or subjects. It would be an advantage if, before starting for some picturesque locality we had some one on the spot to whom we could apply for information as to the best routes and the best time of lighting, etc, etc.

AN ARTIST'S OPINION OF TRICHROMATIC PHOTOGRAPHY.—At a recent meeting of the London Camera Club Sir William Abney exhibited a number of beautiful three-color photographs, his own work, including landscapes both in Britain and abroad. They were probably finer than anything hitherto shown, and included snow clad mountains with exquisite atmospheric effects, studies of still life fruits and flowers, etc., etc., and all in the most beautiful coloring.

At the close of the exhibition Mr. G. A. Story, one of Britain's most distinguished artists, said:

"These pictures were a revelation to him. It was like stepping out of night into day. They reminded him of the work of some eminent painters—Turner, for example—especially in the beautiful atmospheric effects. He also noted how the color had the effect of separating the different planes of the picture; indeed, they were all the source of great delight to him. As pictures they were charmingly selected. He regarded them, not as perfection itself, but far on the way to perfection. He hardly liked to say anything of a disparaging nature concerning them, but he considered that they were perhaps wanting in that immense variety of coloring which one saw in nature. Taken as a whole, they were most beautiful pictures."

PACKING EXPOSED PLATES IN TIN-FOIL.—At a meeting of one of the London societies Mr. Drage said that

recently he packed a number of exposed plates in tinfoil, and at the same time another set in simple paper. On proceeding to develop those in the tinfoil nothing but the ghost of an image could be obtained while those in the paper, treated in every way the same, and exposed under the same conditions, were quite satisfactory. The statement was followed by considerable discussion without any satisfactory suggestion as to the cause of the fading of the image. Tinfoil, as is well known, is not always or often all pure tin, and as Russell has shown that quite a number of metals give off a vapor that acts injuriously on the latent image or on the sensitive film, it may be that to some of those mixed with the tin is to be attributed the evil.

SINGLE LENSES OF LONG FOCUS FOR LANDSCAPE WORK.—That a single lens of sufficiently long focus is infinitely superior to the most expensive anastigmat listed for any particular size of plate in landscape work, is capable of demonstration, as we have often shown; and therefore we are always glad when we can quote an opinion in support of our own on the subject by one whose work is recognized as pretty well up to the top. Such is the statement of Mr. J. H. Field, of Berlin, Wisconsin, in an address before the twenty-fourth Convention of the Photographer's Association of America, the whole of which is well worth quoting, although we have only room for the following:

"One does not need an expensive camera or costly lens, although there are times when they come handy. A

camera with a generous length of bellows so one can use a long focus lens—say, of about fourteen or fifteen inches for a 5 x 7 plate, make a very good combination; and other sizes in proportion. Personally, I prefer a single lens used at full opening; and if the picture be too sharp (as it generally is) a judicious use of two or three thicknesses of celluloid or bolting cloth between negative and printing paper will work wonders."

GLASS HOUSES.—We have to thank our English contemporary, *Photography*, for kind words even although mixed with those that are hardly so. If, however, he will look a little nearer home he will find that he puts the saddle on the wrong horse so far as the translation is concerned although that does not free us from the blame of insertion; but even *he* will sometimes find circumstances beyond his control. Christmas is at hand, however, putting us all into a forgiving mood and we freely forgive even the "Briton" although we *do* know the difference between the man and his country; and as a proof of our forgiving spirit we borrow from the same number the following paragraph, especially as it is just what we have preached ever since we learned how to photograph snow.

THE GOLDEN RULE in photographs of snow scenes is to be sure and give sufficient exposure to the shadows, and to take care on no account to over-develop."

THE WYNNE TEST PAPER:—Our readers will remember that two or three years ago we had considerable

correspondence regarding the keeping, or rather the non-keeping quality of the test paper sent out with the Wynne Exposure Meter; not that it lost its sensitiveness, but that it colored to a shade different from that of the standard test. We have to-day received from the manager of the American branch of the Infallible Meter Company, Henry Wenzel, Jr., of 237 South Fourth St., Brooklyn, a packet of the sensitive paper sent out in October, 1902, and on comparing it with the standard tints accompanying it and with those placed in our meter by Mr. Wenzel two or three weeks ago, the identity of shade is shown to be absolute. A paper that will keep for two years will probably keep longer, but whether or not, two years is long enough in all conscience. While speaking of the Wynne meter we may say that although we have printed the article announcing what its author, Mr. Steadman, calls "the Official Method of Actinic Measurement," we cannot understand how any one knowing the simplicity and certainty of both the Wynne and the Watkins systems, could give more than a passing thought to that of Steadman. It is not needed and will never be employed in the studio, and anything that includes the measurements of fractions of a second in landscape work is simply useless. Steadman, however, has the courage of his opinion, and we cannot but admire the pertinacity with which he strives to get others to think as he does in spite of all that has been said against it by those best able to appreciate the right from the wrong, or in this case perhaps, the better from the merely good.

THE CELLULOID BOGEY:—As the letter which drew forth the following paragraph from *Photography* and which appeared in the *London Times*, was copied by one of our New York dailies, may start a scare amongst weaklings here, we have pleasure in reproducing it, although we had thought celluloid too well known to need such caution.

The Times for November 2nd has a letter signed "D. O.," which we print below. It is a pity that the apparent fear of its correspondent was not in some way assuaged, rather than that he should be allowed to provide a "scare head" for *The Times*. "What shall be thought of people," he asks, "who, with a full knowledge of its highly dangerous qualities, supply such an article for the use of ladies and children without one word of warning?" We give it up. Probably as much or as little would be thought of other people who supply inflammable articles to ladies and children without warning. If people by this time do not know that celluloid burns, when will they learn? If every celluloid article is to have attached to it "a word of warning," why does he not say so? There is no suggestion that the celluloid was sold as talc, while it was certainly not sold to be put near the fire, whether made of celluloid or not. In fact, putting it near the fire, if the prints were on gelatine P. O. P., as in all probability they were, would ruin the prints. The word of warning, if given, should have been to point out that no glazing board with prints should be put near the fire. The full text of the letter, which is headed "Amateur Photography—A Danger," runs as follows: "Sir,—By way of

'glazing' their photographs amateur photographers frequently press the damp pictures half a dozen at a time, face downwards, on a specially-prepared metal sheet about the size of a school slate. To hasten the tedious process of drying the sheet is often put near the fire. A day or two ago I found my wife bending over the fender with a batch of South African photographs on a patent glazer, which she imagined to be talc. She remarked that it was supposed to 'do' them quickly, but that, though otherwise good, it was a slow drier. As the supposed talc looked to me suspiciously

like celluloid, I begged her to keep it away from the fire until I should have communicated with the manufacturers. I now enclose their reply. You will see that they state that 'the glaze is made of celluloid, and would be dangerous near the fire.' As knowledge of the fact may save someone a ghastly accident, I think it right to call attention to it. But what shall be thought of people who, with a full knowledge of its highly dangerous qualities, supply such an article for the use of ladies and children without one word of warning?—Your obedient servant, D. O."

THE UNIFORM SYSTEM OF LENS APERTURES.

BY GASTON M. ALVES.

THE faults which exist in the partial use of the uniform system of marking stops, do not lie in the system itself, but rather in the confusion arising from its partial use. The system in itself, is really a very superior one, and it is the attempt of this brief discussion to make this plain.

As introductory, let us first answer the general question, Why do we name things at all? The ready reply is, to distinguish them, and it equally follows that where a series of things differ *inter se* in a certain ratio of their chief function, to be *fittest*, their several names or markings should express this ratio. Now the chief function of a photograph lens stop is to control the amount of light passing through the lens. Therefore, in order to be *fitly* named or marked, reference must be had to the light pow-

ers of the several stops. We cannot escape the force of this reasoning, nor deny its premises.

Let us now consider the following:

It is customary for the makers of lens stops to so construct them that any stop will admit just one-half the light as will the next larger one. That is, if for any given lens, we should represent the light power of the largest stop by 1, then for the whole number of the stops, we could precisely represent their several light powers by the series,

1, 1-2, 1-4, 1-8, 1-16, 1-32, 1-64, etc.

But as the corresponding durations of exposures increase in exact proportion as the stops decrease, it follows that in order to express the corresponding exposures, we must use the inverse series,

1, 2, 4, 8, 16, 32, 64, etc.

Therefore, if we had a lens with

stops graded in light powers as above, but unmarked, and we wished to mark them with reference solely to the particular lens, then the fittest way to do so would be by using the series,

No. 1, No. 2, No. 4, No. 8, No. 16, No. 32, No. 64, etc.

We would thus, with the least possible mental effort, be enabled in practice, to pass from any one stop to any of the others. We would directly see that No. 64 would require 64 times the exposure of No. 1, 32 times No. 2, 16 times No. 4, etc. Also conversely, No. 1 would require 1-64 of No. 64, 1-32 of No. 32, 1-16 of No. 16, etc. So too, we would with the greatest ease, see the ratio of any other combination which could arise; such as, No. 32 would require 8 times the exposure as would No. 4.

It ought to be plain to see, that such a system for the particular problem, that particular lens, would exhaust the simplicities of the case. The science of numbers does not offer, nor can our minds furnish, a reduction to greater simplicity. The man who does not see that this must be true, fails to follow the necessities of the simple problem.

Now as a matter of fact, the uniform system is precisely the same as the foregoing, with the following exception: By adopting a certain F-n value as No. 1, it ties itself to all lenses. Thus, the uniform system not only permits us, with the least mental effort, to arrive at the quantitative light values of the several stops of a particular lens, but it also allows us to pass to the stops of other lenses. Smith may have a lens that will work up to No. 2, while Jones may have one that will only work at No. 4; yet all

of the stops of corresponding numbers will be of equal light values in the two lenses.

But what are the objections urged against the uniform system?

As is well known, it bases its No. 1 on a diameter of aperture, 1-4 of the focal length. Now it is objected that some lenses are made, working at a greater aperture than 1-4. But in such extreme cases, there is no great difficulty in using the proper fraction.

Surely, we would think strangely of a man who objected to the order of Nature, merely because he could not in his computations get below the numeral 1, without getting into fractions.

It is also objected that the uniform system has no relation to focal length. For the sake of the objection, admit this to be true, What of it? In possibly nine hundred and ninety-nine cases in the thousand, we use our stops in their relation to light values, and *not* to focal length. In the remaining one in the thousand we may need the focal relation, and as a matter of fact it is easily reducible from the U. S. value. It is only in the mathematical theories of optics, that we have any need for the focal values of the stops, and not often there, but if we have any competence in such theories, we will surely be able to convert an U. S. value to a F-n one.

It is also urged against this system that the U. S. is sometimes mistaken for "United States." This is quite extraneous to the system, and hence a small matter, but such as it is, it seems an objection well taken against the name. However, if the system should become universal, we could

well drop the U. S., and content ourselves with the simple No.

The reader who has followed the foregoing will see, that the uniform system is quite simple in its nature, and particularly so (the important thing) in its every day application. It will now be well, by a comparative analysis, to show its great superiority to the F-n method:

But before beginning, it will be well to point out here, that there are quite a number of workers, who pay little or no attention to the markings of stops. They employ such a size aperture as "looks about right," and they give the time to the exposure as "feels about right." The object here is not to criticise such men—many of them do good work with commendable uniformity, although they are prone to give relatively greater exposure for large apertures than for small ones—but the object of here mentioning them at all is to exclude them from this consideration, for it is obvious that such methods, or rather lack of methods, cannot be adjusted to any system of stop markings whatever. Usually, such men, if they express a preference at all will generally prefer the F-n method, chiefly because "it is the good old way." But as they use no system themselves, they are hardly to be considered, in offering any system to others.

The F-n method is largely the reverse of the U. S. one. It is very simple in things we only *infrequently* need, but involved in things we *frequently* need. In its nomenclature to the focal length it is simplicity itself; but in relation to the light giving power—the very thing we are constantly in need of in our every day

practice—it is involved. The light values may of course be solved, but the process is tedious. The denominators of the focus, F, do not expand by the simple process of doubling, but by a geometric series produced by the constant factor, of the square root of 2. Consequently, if by computation we wish to determine the ratio of light values of two stops, we must bear in mind, that it can only be done by knowing that the light values of the two stops vary as the quotient of the squares of the denominators of the two fractions. This seems to be about as simple as it can be put, but to attempt to put this into the average worker, would cause him to stand upon his head.

But there are other ways of getting at the light values in the F-n system:

We may memorize them. Let us see what this means. Beginning at no higher than F-4, we may write the series,
F-4, F-5.6, F-8, F-11.3, F-16, F-22.6,
F-32, F-45, F-64.

Now there are thirty-six permutations or combinations in the above nine stops, and we must memorize them all, to know their inter relations of light values. Any attempt of this great task would only end in disgust, and even if acquired, would likely soon be forgotten.

However, there is still a third way, and really the best, but it is much like the primitive man crudely doing his sums on his fingers. We may take the list above or resort to the lens itself, and count off the light values. Suppose, for instance, we were satisfied that with say F-8, a given scene would require a certain

exposure, but wanting a sharpness and depth of focus in the particular photograph, we should conclude to render the exposure with F-22.6.

How much longer should the exposure be over that for F-8? Now we know, although the markings do not indicate it as with the U. S. markings, that the stops really descend by halving the light. Therefore we see that the next stop to F-8 is F-11.3, and consequently requires 2 times the exposure. Also that F-16 is next to F-11.3, and will require 2 times the exposure of it, and 4 times that of F-8. Further, that F-22.6 is next to F-16, and will need 2 times the exposure of it, and 8 times that of F-8. Thus, in this plodding way—the best for the F-n method—we get our result. How different from the U. S. method. There, the corresponding stops would have been respectively, No. 4 and No. 32. We would have seen at an instant that 4 would go into 32 just 8 times.

There can be no question, that the uniform system is the most rational way to mark the apertures of lenses, and the custom should be universal. Even the advertisements of the speeds of lenses should be in the U. S. numbers. How many photographers can tell how much more rapid a lens working at F-5.6 is, than one working at F-6.3? With the other system, all that they would have to do in order to get the ratio would be to divide the one into the other.

The makers of expensive lenses will mark them in accordance with the directions of the purchasers. Those about to get such a lens should *insist* that it be marked in the uniform system.

Thus they will not only save themselves much annoyance in its practical use, but at the same time help by their course, to cause the makers to establish the better system. But even to the selfish interests of the individual user, it would not make much difference, whether or not his lens was the only one marked in that way. If he understands somewhat of optics, he can at any time compute the focal relations of his U. S. stops. If he does not understand elementary optics, then the focal relations will not concern him. In either event he will with his U. S. markings, be carrying on his practical every day work, with the least mental effort.

[While always glad to show both sides of a question this is so contrary to our teaching that we cannot let it pass without again emphasizing our agreement with the Society, The Royal Photographic, that introduced the so-called uniform system, and a few years thereafter *abandoned it as a mistake*, recommending instead the f values, which according to Bausch and Lomb, the only opticians so far as we know who continue to mark their lenses on that system, "represents the absolute photographic value of a lens," and that each stop from the largest down should be just half the value of its predecessor. Bausch and Lomb too, we are glad to say, have abandoned it in the marking of their new portrait lenses.

The figures of the Uniform System mean nothing unless their relations to the f values have been learned, while, say, f-8, tells of a particular intensity; and with the markings arranged as recommended by the Royal, and now almost universally adopted, each

succeeding stop is just half or double that of its predecessor, tells without any learning or memorising all that the photographer needs to know about his stops. We say, then, in the words of our correspondent, but with a very different meaning, "Those about to

get an expensive lens should *insist* that it be marked in the f value system." Those seeking further information on this subject should refer to pages 47 and 48 of our last year's volume, a reply to G. H. Kretz.—Eds.]

TO CAMERA CLUBS AND PHOTOGRAPHIC SOCIETIES;

IT is a well understood fact that the camera clubs and photographic societies throughout the land, or many of them at least, are not so full of life and vigor as they should be; and that, mainly at least, for lack of something definite—something in which all could take part; or something that could be divided into many parts, so that a goal or goals should ever be before the members; the meetings in addition to other matters of business, giving opportunities for reporting progress.

As an aid to the bringing about of this desirable state of matters the following extracts from the address of the President of the Edinburgh Photographic Society at the commencement of the 1904-1905 session, should be of considerable value; as while some of the observations and recommendations are purely local there is enough of general application to make it worth the careful study of the Secretaries on which so much of the lives of the Societies depend.

After saying that a Society cannot stand still, it can only slip back or step forward, and that the usefulness of a Society cannot be measured by the

numbers on its roll of membership as well as by the work they do, he continues thus:

"The question then arises, How are we best to attain the desired end of carrying out our duties as a Society? which I consider firstly in putting our beginners in the right way and providing our more advanced workers with the materials and appliances not usually available to private individuals; and secondly, and of much more importance, the bringing of new ideas before each other, and by discussion and consideration weeding out the good from the bad, and fashioning them so as to be useful. This twofold aim, however, requires no little sacrifice, which one and all must be prepared to make. We must be ready to find money, for I imagine that there is no one that considers that either our equipment or premises are satisfactory; but what is more, we must be prepared to give more thought perhaps rather than time to the pursuit which is the occasion of our existence.

"How the money is to be raised is a delicate question. Let me, however, make one suggestion. Would it not be better to rely on the sturdy self-sacrifice that has so nobly marked the Scottish character in the past, and provide it from within rather than look for it to drop from the hands of some princely benefactor without? If we do not work for it we shall in all probability neither value it nor benefit by it.

"Leaving this matter in the hands of the Society, for in a democracy like ours

it is for them to speak rather than the President or Council, let us now consider the directions in which we may profitably spend our efforts, and though perhaps none of my suggestions may be in any way new, they may lead some present into lines of work that may be fruitful.

"For this purpose I shall look on photography from three aspects—(1) As a means of simple representation; (2) as a vehicle for pictorial expression; and (3) as a field for scientific research; though I am aware that all three sections overlap to a very large extent.

"As a means of representation, photography has its most common and obvious application, and I need only refer to its employment in portraiture, photo-micrography, star-mapping, and the like, to show in what diverse directions it is utilized. For those who are contented to apply photography only as a means of representation I would suggest that they should concentrate their efforts as far as possible in some particular direction, and in this way there is much that is valuable to be done. Systematized survey work of an ever-changing town, as is now being carried out by our own Society in so satisfactory a manner, as the current *Transactions* point out and the forthcoming Exhibition will demonstrate—the study of a river from source to mouth, as suggested by Mr. Dibdin; the study of the agricultural peculiarities of a district; the following up of a style of architecture; the recording of meteorological or other natural phenomena, etc., are merely examples of the directions in which photography, as a representing art, can be made the basis of the means of preservation of, and of the addition to, much valuable knowledge. As to the means of representation, and in how far the representation is exact, is rather a question for the third or theoretical aspect of the subject, rather than the present, but I may add that beyond the simple photograph attempts may be made to represent the solidity of the object by stereo-photography, its color by the various processes of color photography, and its movement by the kinematograph, and in all these directions there is much that may be done; e.g., tak-

ing the use of the latter instrument alone, there are as many manual operations being replaced by mechanical, so that their methods will be forgotten and can only be adequately represented to future generations in such a way; or taking another case, as I saw recently exhibited in Cambridge, the gradual growth and motion of plants may be recorded and can be exhibited in more rapid and convenient sequence than occurs in nature.

"As regards photography as a means of pictorial expression I will say but little, as I feel that there are those present who are much more capable than I of discussing the matter. However that may be, I think there can be no question in the mind of the dispassionate critic who is in any way acquainted with what is being done, that photography *may be* employed as a vehicle for the expression of an artist's ideas just as a brush, pen, or pencil, and with the exception of its being practically confined to monochrome, with almost as little restriction. The public, however, require education; there are many who still think that the essential feature of a photograph is that it should be what they call "clear," and here I think it is our positive duty as a Society to hold our exhibition in a hall of greater suitability and accessibility than our present room, so that the "man in the street" may have a better chance of realizing what good photographic pictorial work is like.

"Coming to the third, and to me the most interesting, division of the subject, viz., the theoretical, I feel that there is so much that should be said that it is difficult to say anything without being brought to book for being one-sided and partial, whilst of what I might say there is not a little that is but imperfectly known and disputed that I run the risk of setting up a discussion beset with so many thorny points as to permanently endanger the peace of mind of the Society rather than stimulate its activity.

"To the beginner studying scientific photography it seems an easy enough affair—some apparently straightforward optics and simple chemical reactions; but on a little further investigation, the difficulties in photography, as indeed in every other science,

become apparent, and it is obvious how little has been done, and how much has to be accomplished before a thorough knowledge of what really happens every time "you press the button and we do the rest" occurs. How few care or think about it at all, but are simply content to accept the result?

"To raise a few points, I should like to ask, in the first place, in how far are our photographic representations misrepresentations? Much has been done in perfecting plates and lenses to give the correct value of natural colors in monochrome, and a form and proportion in our print exactly depicting the object photographed, but in how far do they really do it? For example, is the strictly rectilinear, sharply-focussed architectural photograph that is taken of a building at close quarters with the best lens and carefully-levelled camera really like the mosaic we build up in our minds of the numerous images formed by moving our very narrow-angle eyes, and do not what some people are pleased to call the "fuzzy-graphs" of certain pictorial workers give a truer picture? I am by no means sure. Looking in another direction, if we try and analyze the chemical and physical actions going on in even our simplest processes, we are in many cases face to face with similar difficulties, whilst in the fundamental process of all, though we may talk fluently about latent images, subhalides and the like, how much is but purely speculation!

"However, the position is far from hopeless: earnest workers in all directions are piecing the various puzzles together, and I feel sure that all can lend a helping hand. Shall not members of our Society now, as

in the past, place a few fragments in position?

"Besides the fundamental problems, there are many side issues, and amongst these I would first mention color photography. Much has been done in this field, but I feel that in spite of the extraordinary ingenuity that has been expended in devising processes, that the main efforts now being made can only result in compromises that are more of interest as scientific curiosities than of real value from the point of view of perfect accuracy of representation or pictorial work. However, it may be that one of the many processes of color photography, so freely heralded by the daily papers, may turn out to be all that can be required. In this connection I may mention that no little progress has been made by Professor R. W. Wood in perfecting his diffraction process, which he has also adapted to the Jolly method, thus substituting invariable diffraction colors for the fugitive aniline dyes previously employed. But though the results exhibited at the British Association were beautiful, the application is cumbrous and far removed from the ideal color photograph some people some day hope to be able to hold in their hands.

"Members of Clubs and Societies, those of them who are amateurs at least, should remember that from Talbot, who made the first negative, to Rawlins who but yesterday showed how to print in oil, and almost without exception, every step in the progress of photography has been made by an amateur; and to him alone, if the future may be judged from the past, we must look for the still greater progress that is to come."

ON THE MAKING OF A SALON PICTURE.

WE have seen a good many of the works of A. Horsley Hinton, but never anything finer than his picture of Niagara at present in the Salon of the "Linked Ring;" and more, many more of Ni-

agara, but never one in which that popular subject was treated in just the same way, and never one that we liked so well.

In speaking of pictures of Niagara we do not refer to the hundreds of

thousands of thoughtless snap-shots that are everywhere present, but to the few thoughtful, carefully studied out, purposeful pictures that are to be come across from time to time; and they, or most of them, give evidence of a desire to represent the falls in action; to convey some idea of their majestic magnitude, their grandeur, and perhaps their noise. On the other hand, Mr. Hinton sees in them something unusual or at least not often seen; their state of restfulness when they clothe themselves not alone with their own mist-like spray but when they retire as it were within the veil of an alien haze, leaving only sufficient indication, like the warning growl of the recumbent lion, of the mighty power that will be revealed when the mist is dispelled.

Mr. Hinton reproduces the picture in *The Amateur Photographer* and tells its history from the inception to its delivery at the Salon, and the story is so full of interest to every would-be picture maker and invaluable education in picture-making that we reproduce it with pleasure; only wishing that we could reproduce the picture with it:

I do not remember ever to have carried with me for so long a persistent desire to realize an impression received from nature as was the case with my "Niagara."

Usually in preparing for an exhibition, I have looked through my more recent negatives, and selected those I felt most in love with, and which appeared most suitable. But now the visit to the great Falls had impressed me, and from that moment until I could get to work at home in my dark room I was filled with a burning de-

sire to give visible expression to what I felt. From Niagara, I passed westward to Chicago, St. Louis (where I had an anxious task to fulfill), thence to Washington, Philadelphia, and New York, and through all those varied scenes, the annoyances of travel in a strange land, the daily irritations due to the precocity of a country in the rawness of youth, I carried that desire; and perhaps this for me somewhat exceptional mental attitude with respect to my picture accounts for its being of rather a different character to most of my work.

There was something of pride, too. I have often heard it said that there is a sameness in my pictures, and that I continually "harp upon the same strings," and whilst I do not know that there is in that a great sin, I was anxious to do a hackneyed subject in a new way, and to show my critics that I was not so deep in my-groove that I could not step out if I were sufficiently moved to do so. Well, there it is. With my hands very full of work and matters to plan and attend to, with everything in arrears owing to seven or eight weeks' absence in America, it was not until within a week of the Salon receiving day that I had secured a 24 by 18 negative of the quality I wanted, and ultimately I found myself with just four days in which to do the printing, and those four days not entirely free, for *The Amateur Photographer* has to come out every week, pictures or no pictures, and other literary work presses hard.

The first two of those four days it rained hard, and as my limited accommodation compels me to print so large a size out of doors, and my negative

was prepared for platinotype printing (platinotype printing in the rain!), perhaps you can imagine how my heart died within me.

Despite the rain I made four prints in those two days, but they were useless, being "muddy" and flat; then in the following two days, with better light, I made eight more prints, the development of each big sheet of paper in turn being awaited with an almost desperate eagerness which was painful.

That series of eight prints represents a progressive series. In each the experience gained with its predecessor was made use of to intercept or admit the action of the light in various parts, and each print was a little nearer the effect aimed at.

My printing-frame for this work is a very massive affair, which I am only able with great effort to lift a few feet, yet during the making of each print that frame needs to be removed indoors for examination a dozen or two times.

Working thus all day with the intense anxiety for success increasing as the day creeps on, is no light engagement, so that perhaps the sympathetic reader can understand with what an intense feeling of relief I found that the final print made just before daylight was exhausted on that second day seemed quite satisfactory. That print was quickly washed, and at once mounted, and late that night a very tired but very grateful photographer crept out to his workroom, and lighting the gas, examined that print which had been won with so much travail, only to find that a portion previously overlooked was so dark as to render the otherwise fine print useless. And

the next day was sending-in day!

One could not accept defeat when victory had been so near. Only one sheet of paper remained, and that with as cheerful a heart as I could command was set out to print early next morning, but a single sheet is too little to put one's trust in, so an urgent messenger was despatched to London for more. By 11:30 a. m. the first print was printed; time was getting short; the fresh supply of paper had arrived; so without pausing to develop, another one was started; by about 1 o'clock a second was ready, and then—well, it was a last chance, now it must be hit or miss. Those two prints were developed, and as I transferred each from the large dish of nearly boiling developer to the acid, I laid them face down. I had to wait a minute or two before I could summon up courage to see whether success or irremediable disappointment awaited me. Both prints were identical. I cannot now tell one from the other, and one is at the Salon.

Only half dry that afternoon, one of those prints was placed in its frame, and reached the Dudley Gallery within the specified time.

And yet our American photographers say we on this side the Atlantic do not take our photography seriously!

I saw Niagara under varied conditions—first sparkling bright in the clear spring sunshine, next when the wind carried the spray in a vast moving column across to the Canadian side, and clouds of heavy mist, nursed amidst the ice floes of Lake Erie, for mountains of snow and blocks of ice were in April still abundant, came down the rapids, and mist, rain and

spray mingled in a strange and spectral manner. That was the impression I carried away most clearly—not the height of the fall, or the vast volume

of water, or the noise or color or movement, but a certain beauty of form and proportion, and the evasive mystery which encircled this wonder.

MERCURY LAMP PHOTOGRAPHY AT THE LOUISIANA PURCHASE EXPOSITION.

MOST of those who attended the October convention in St. Louis saw in the Westinghouse biograph pictures in the Palace of Machinery at the Fair a notable example of the results to be attained in interior photography by the use of the Cooper Hewitt mercury vapor lamp. Moving pictures are taken at the rate of fifteen a second, and as the Westinghouse pictures were taken in several of the darkest forges and foundries of the works in the Pittsburg district their great success as the first interior biograph pictures ever taken was a new tribute to the lamp's high actinic efficiency. To many of the delegates it was a novelty also to see the lamp in use for fine portraiture in the studio of the Official Photographic Company at the Fair, and the photographs by Gulick, of Boston, reproduced in this issue as specimens of that Exposition work, are, therefore, doubly interesting.

One of the most talked-of applications of the mercury lamp in Exposition photography, of course, was its use in the busy studio of Mr. Stevens, the official pass photographer, where as many as 1300 portraits a day were taken with one camera during May and June. Very few of the thirty or forty thousand applicants for passes who were guided in quick succession

through the narrow aisles leading to the camera gate and photographed with lightning-like rapidity by Mr. Stevens or his assistants, had ever before been placed under the brilliant greenish light of the Hewitt tubes, and all but these few knowing ones expressed great surprise when they were told that the camera shutter had been snapped at them—one-eighth of a second exposure—just as they had been preparing for a long agonizing

TYROLESE SINGER.

Photo by Gulick at World's Fair with Cooper Hewitt Light.

pose. The contrast from the photographic pass work at Buffalo, where the applicants, after a long wait in the anteroom, sat three in a row during a plate exposure of a minute or more, and often had to return for a second pose, was the subject of much comment. Mr. Stevens, by an ingenious arrangement of his camera so that it was raised or lowered exactly as the gate holding the pass number was raised or lowered to conform with the height of the subject, made it possible for one operator to do both the posing and shutter work without loss of time in moving between the gate and the camera. The pictures were taken upon 2-inch film, each picture 2 1-2 inches long. The mercury lamps, seven tubes in all, were hung in a frame only two or three feet to the front and right of the subject. Mr. Stevens devised a new camera before the opening of the Exposition with which he was ready to make four separate photographs of each subject at one exposure, for the purpose of printing a pass book which should contain the pictures of the holder on each day's coupon, but the extra cost of printing prevented its adoption. The printing outfit used in the pass photographer's work rooms was arranged to afford a comparison of the efficiency of the mercury lamp with that of the ordinary light used in printing, and Mr. Stevens judged the time of exposure with the new lamp at about one-six hundredth of that necessary with the latter.

Mr. Gulick did portrait work with the mercury lamp in the booth of the Official Photographic Company all through July, August and September, and Mr. Nichols continued it through

the closing months of the Fair. Messrs. Durilla, of the Premier Dry Plate Company, and Reynolds, of the Eastman Company, assisted in the special demonstration of the lamp at the booth on the plaza on Friday evening of the convention, and Mr. A. S. Hubbard had charge of the special display at the Forest Park Hotel during the week. The postal photo booths equipped with the Hewitt tubes did so well at Delmar Garden in May and June that several were opened in July in different parts of the Exposition Grounds and on the Pike. In several of the Pike shows the lamps were used, as they have been used for the past few seasons at Coney Island and elsewhere, for illumination where their peculiar greenish hue affords entertainment and amusement, and the Westinghouse exhibits in the Palaces of Electricity and Machinery were brilliantly lighted with long tubes hung high overhead. The most striking use of the new lamp, of course, was in the dazzling illumination of the top platform of the De Forest Wireless Telegraph Company's high steel tower near the Lindell entrance, which was seen from a great distance.

Mr. Pirie MacDonald, whose early appreciation of the Hewitt light led to his statement that it was the one material advance in photography since the advent of the dry plate, has recently replied to questions about its use that, with a face illuminated by it to the same apparent intensity, the same results as that from daylight may be secured with less than one-half the exposure, and that "anything that daylight will produce can be obtained by its use, the ease with

which varying effects are secured being dependent entirely upon the skill of the operator, and one of its most important uses in photography being as an auxiliary to daylight, in which it is invaluable." A large photograph of "King Lear," by Rockwood, exhibited at the Fair, showed the life lines in the hands absolutely distinct, so that a palmist read the subject's character by it, "which means," Mr. Rockwood writes, "that the picture was taken in less than a heart's beat."

Apart from its use in photography and photo-engraving, it is asserted for the mercury vapor lamp that actual tests have shown it to be less fatiguing to the eyes than any other

artificial light, that it is the most economical light of the present day, and that its even illumination makes it particularly pleasing to draftsmen, machinists and stenographers, and in all places where the question of color effect is not under consideration. The grand prize awarded to it at the Fair was not spread over a lot of electric apparatus, out covered the mercury lamp alone, an honor not bestowed upon any other single feature of the electrical exhibits. The part that it seems destined to play in emancipating the photographer from the limitations of daylight practice would of itself entitle Mr. Hewitt's invention to such recognition.

OUR PORTFOLIO.

Prints for criticism; only one at a time and only once each month; to be sent to Dr. John Nicol, Tioga Centre, N. Y. The coupon found in our advertising pages must be attached to the back of each print.

1861. E. M. HULBERT.—"In the Field," a boy and child in an uninteresting high foreground all apparently in one plane as of something merely hung up behind them, is, so far as the figures are concerned, an example of very good photography, and nothing more. It has, however, the rare virtue, rare we say in such cases, of not simply staring into the camera, but actually apparently interested in each other; the elder showing the younger some flowers, suggesting, in our opinion, a better title, "The Young Botanist." We think it would have been possible to have chosen a more suitable background or to have added greater interest to this by so placing the camera as to separate it into more than one plane. Or the figures are good enough to deserve being transferred to another and more attractive one.

1862. W. H. LUCKHAUPT.—We hardly know what to say of the dozen sheep huddled together in a barnyard, and cannot think of any cause that should have

A PIKE HEY-RUBE.
Photographed by Gulick at World's Fair, with Cooper Hewitt Light.



induced you to spend a plate on them. They are neither picturesque nor is the photograph pictorial in any sense, and it is made all the less interesting from being printed so as to be without contrast or play of light and shade. Suitably printed, we should have said that it was a good photograph of a subject not worth photographing.

1863. S. F. CLOWNEY.—"Contented," a boy on a bench outside the house with a wooly dog in his arms and a box of grapes at his elbow, has at least the elements of contentment, and the way that he regards the dog abundantly proves that they have the desired effect. Boy, dog and basket are right so far as they go, are indeed fairly well photographed, but the background is simply abominable; and if nothing more suitable could have been found you should have left it severely alone. It is a good picture of the *genre* class, utterly spoiled by the background of nothing but a series of parallel horizontal lines. Cut it out and print it into another and you will have a pretty little picture.

1864. HARVEY E. WILMOT.—"The Mirror." That which gives to your print its title would, had it been otherwise good, have made it worthless, a reflection as clear that when turned upside down it is distinct as the objects themselves. In photographing such a subject the water should always be disturbed by the throwing in of a stone or other heavy object. But without this the photograph is a waste of material from under exposure, everything that is not white being black. You never in nature, except at midnight, saw grass and trees so black, and never even in the brightest sunshine saw the sky and the bridge, and indeed everything on which direct light had fallen, anything like so white. You cannot make a photograph worth looking at without sufficient exposure, and this needed at least three or four times what it got, and the development has been carried on far too long.

1865. C. R. LUDLOW.—"Peek-a-Boo." What was said of the exposure of 1864 applies equally to this, it being nothing but white and black; nor has it the advantage of the other of being a good subject. The forked trunk of a great tree with the face of a girl in the fork is not a thing that those who take photography seriously would care to perpetrate. When it is done, however, it should be well done; and this has not got nearly sufficient exposure. The main tree was never so white nor those behind it ever so black, while the patches of sky behind are simply white paper. As we said to the author of 1864, you will never make a photograph worth looking at till you learn how to give sufficient exposure and to develop without blocking up the lights till they are all equally opaque. Under exposure is the besetting sin of at least 90 per cent. of—we shall not say photographers, for they are not worthy of the name, but of all camera carriers; and until you learn to expose for the shadows, and develop for the lights, that is so that the lights, each in its own degree, shall include the scale that is in the subject, you must be included in the latter class.

1866. F. F. SORNBERGER. — "October Woods." We can only say of this that it

S. F. Clowney.
"CONTENTED."

No. 1868.

THE HOME BY THE RIVER.

A. R. Haslett.

No 1869.

SHEEP.

Wm. H. Luckhaupt.

evening. A longer exposure and more suitable development would have made a much better picture.

1869. M. C. W.—“The Sentinels” is a fine subject from a well selected viewpoint, its most prominent mistake being the altogether disproportion between sky and landscape, four and a quarter inches of the former to an inch and a half of the latter. An immense improvement in the placing would have been to lower the lens so as to give, say, an inch more landscape and an inch less sky. This print is very much improved by the trimming of two inches and a quarter from the sky. The error in placing doubtless arose from a desire to include the tree-tops in the picture not by any means a necessity, indeed in this case it would have been better to leave them to suggestion; a picture being always better of a little left for the imagination to supply.

Nor is the technique quite what it should be. The tone is too even, too much one shade of darkish gray without contrast, as if from over-exposure not made up for by suitable development. Improved as we suggest and with the fine atmos-

C. R. Ludlow.
“PEEK-A-BOO.”

is a fairly good photograph of a subject not worth photographing. It is taken against the sun for no reason that we see, and a few trees without one of more importance than another, and without a suggestion of any kind. You should learn the art of seeing, get the ability of recognizing a subject that suggests more than is shown, or something that in some way makes it of interest.

1867. G. A. HAMMOND.—“The Grave of a Woodland Monarch,” a portion of a bleached and rotten stump, was not worth photographing, as it is neither picturesque nor suggestive, at least it does not appeal to us, and the tree in the background is so dark from under exposure as to make the photography as unsatisfactory as the subject. Never forget that if a subject is worth photographing it is worth photographing well, and that cannot be done without sufficient exposure.

1868. A. R. HAZLETT.—“The Home by the River” is a fine subject from a good point of view, and fairly well photographed. The sky and water, however, are whiter than ever they were in nature, while the home is dark as if in the shades of

M. C. W.
“THE SENTINELS,”

THE GRAVE OF A WOODLAND MONARCH.
No. 1867

G. A. Hammond.
UNIV. OF MICH.

pheric effect that you have secured, there is in it the making of a very fine picture.

1870. FRED SEYMOUR.—"Spring Showers," a 2 x 2½-in print sufficiently fuzzy or out of focus to be meaningless, and of an even low tone altogether void of contrast. Such small prints are nothing if not sharp, and we should not consider this worth printing.

1871. S. ROY CLARK—"Allurement" is a fine subject badly photographed, a good subject, but a bad photograph. A far too short exposure has resulted in everything in direct light being as white as paper can be and everything else equally black, the lights evenly scattered all over the surface as if distributed from a pepper-box, while the beautifully winding road is as if it had been whitewashed. The too short exposure has induced you to prolong development till all lights from the lowest are, in the negative, quite opaque and in the print all equally high, higher indeed than ever they were in nature. Reduction with ammonium persulphite might improve it, but nothing could supply the missing detail in the shadows.

1872. S. A. SMALL—"Portrait," a lady with violin from the same model as 1832 of our November number, with, unfortunately, the same lack of animation or expression. We can understand your not seeing this want so well as we, because of acquaintance with her, knowing how she can respond under conditions, and in imagination supplying them in the picture.

It may be said of models as of artists; they are born, not made; but training can be made to do much, and your photography is so good that it is a pity that it should not be met by an equally responsive model. The longer we look at this the more we feel that she is standing to be photographed; repose where there should have been an indication of action, a something that tells that she is about to play. The photography, as we have said, is good and the placing perfect, even to the support given by the plant in the right corner to the arm and violin. Try again, not necessarily exposing a plate each time, but

simply going through the form, and with practice you will surely find many poses and positions expressing just what we mean. We like very much the method of printing with broad margin and especially the placing in the folder; but we should prefer toning of a warmer color, that is, not carrying the toning quite so far.

1873. F. C. SUTHERLAND—"The Kirkdale Road," a good subject well placed but made worthless from under exposure, a sky of white paper and everything else blacker than ever they were unless at night. The lens is also of too short focus for the size, although we do not find fault with that, such small pictures being, when really good, only fit for enlargement. Twice or thrice the exposure would have made this a pretty little picture, and when enlarged to, say, 12 x 10, a fine picture.

1874. H. RUSHTON.—Your flashlight portrait is very far beyond the average of such attempts, indeed much better than most of those taken under the most favorable conditions, the only fault being that development has been carried just a little too far. In future, however, you should try and get your model to look less serious. She looks as if heartbroken or suffering under some grievous disappointment.

SOCIETY NEWS.

Secretaries of Societies, or Camera Clubs who want their meetings reported or who have communications of interest to photographers that they wish to have published should send them direct to Dr. John Nicol, Tioga Centre, N. Y.

THE CAMERA CLUB OF NEW YORK: The regular monthly meeting of the club occurred on Tuesday evening, December 13th, last. After the reading of the reports of committees and officers the President, Mr. Fred E. Ives, introduced Dr. H. G. Riffard, who demonstrated certain phenomena in connection with fluorescence and radio-activity. By means of an induction coil and special electric lamp he was able to excite in a certain grade of quartz an absorptive power of invisible rays peculiar to it. If the mineral was now located near a sensitized plate for a certain period, light acting emanations, invisible to the eye, would proceed from it and make an impression on the plate readily developable. It was shown that there are invisible rays in the deep violet end of the spectrum that exert an effect on a sensitized plate more peculiar than the common violet. Several interesting experiments were made before the audience; the peculiar light effects obtained from minerals were somewhat difficult to understand.

The next evening, December 14th, the annual competitive Lantern Slide Competition was held at the club rooms. The judges appointed were, Alfred Stieglitz, Charles I. Berg and Edouard Steichen. There were, in all, twelve competitors and six slides were submitted by each. Two cups were the prizes; one the Stieglitz cup, another a smaller cup for the best set not awarded the Stieglitz cup.

The result of the voting of the judges awarded the Stieglitz cup to Mr. Seaman, who had charming snow slides and one particular realistic slide taken by moonlight of a dwelling finely lighted in the interior, so that the windows appeared to be illuminated from the outside as they are usually seen, while in the distance could be seen other lights across the frozen Hudson.

The picture, as a whole, presented a remarkable night effect, was brilliant yet not too harsh, just right to be pleasant to

look at. Mr. Seaman was applauded vigorously on his success.

The second cup was awarded to Mr. Eickemeyer for the general average excellence of his slides, all of subjects that he has won honors on and Mr. Agnew had an honorable mention for his excellent Mexican scenes.

Brooklyn Camera Club.

The Brooklyn Camera Club announces the following rules to govern the entries of its coming Exhibition and competition to be held at its rooms on February 16, 17 and 18, 1905.

The competition is open to Amateur and Professional Photographers.

Pictures must be framed or passe partout, and forwarded express charges prepaid to the Club Rooms, 776 Manhattan avenue, Brooklyn, N. Y., not later than February 11, 1905.

The name of the exhibitor and address, also title of picture, must be written on back of each frame and a list of same sent to the chairman of the print committee.

The following are the awards: President's award for the best picture in the exhibition, a silver medal, a bronze medal and honorable mention in the following classes:

Genre, Portrait, Landscape, Marine and Miscellaneous.

The jury having full power to withhold any awards in the different classes where there is not sufficient merit in their judgment to warrant same. Also are privileged in discriminating on the pictures sent in, or any such pictures that do not meet their approval for hanging in this Exhibition, as the jury is requested to select up to two hundred pictures. Further information will be gladly furnished by addressing

MR. C. M. SHIPMAN,

Chairman of the Print Committee.

The American Lantern Slide Interchange.

The annual meeting of the Board of Managers for the testing of slides occurred at 361 Broadway, New York, on the evening of December 8, 1904. There were present the full Board: F. C. Beach, of New York; W. H. Cheney, of East Orange, N. J.; John P. Zenner, of Buffalo, N. Y.; Herbert F. Smith of Syracuse N. Y. and Henry S. Redfield, of Hartford, Conn.

Mr. H. R. Terhune, of Orange, N. J., was also present, as a guest.

There were about eighteen hundred slides examined which had been submitted by eighteen clubs, not quite so many in previous years. Two new clubs were admitted. The Bisbee Camera Club of Bisbee, Arizona, and Brockton Camera Club of Brockton, Mass. The New Britain Club failed to have enough slides approved to qualify. The photographic section of the Hartford Scientific Society secured the remarkable privilege of having every one of the 50 slides submitted, approved and accepted by the full Board. It is seldom any thing of this kind has occurred during the long period the Interchange has been in existence. The unusually high percentage was due to the personal supervision of Mr. Redfield in carefully testing and sifting the slides before submitting. The

Orange Camera Club was the next highest in average, having one hundred approved out of one hundred and twenty-five.

The clubs composing the present membership of the Interchange are: Photographic Society of Baltimore, Brockton Camera Club, Photographic Section of the Hartford Scientific Society, Newark Camera Club, Orange Camera Club, Trenton Photographic Society, Columbia (Philadelphia) Photographic Society; Pittsburg Photographic Society of the Academy of Sciences, Syracuse Camera Club, Rochester Camera Club, Buffalo Camera Club, Toronto (Canada) Camera Club, Athens (Athens, Pa.) Camera Club, Hamilton (Canada) Camera Club, Chicago Camera Club, Minneapolis Camera Club, Grand Junction (Colo.) Camera Club, California Camera Club, Washington (Tacoma) Camera Club, Vancouver (B. C.) Photographic Society.

There will be about ten sets of slides in circulation. One of them is a set illustrating the St. Louis World's Fair, loaned by Mr. W. H. Rau, Philadelphia, Pa.

The Interchange begins the season of 1905 with a very good selection of slides and with the promise of additional foreign sets, which it is expected will be of interest to the participating clubs.

OUR TABLE.

Books for review and apparatus and material for examination and report to be sent to Dr. John Nicol, Tioga Centre, N. Y.

THE PRACTICAL PHOTOGRAPHER, AMERICAN EDITION, for November, keeps up its character as one of the most useful of photographic magazines, and, as we said when noticing the September number, American photographers are indebted to the speculative energy of the Photo-Era for the opportunity of easily getting it.

Arthur Burchett is the artist chosen for appreciation in this; an artist in more than the usual sense, as he is a painter first and photographer afterwards; but, unlike most of his kind, instead of photographing on the sly, he has often exhibited in both

the Royal and the Salon. Speaking of photography he says: "Photography will always be photography, and it can never be anything else. Art is a creation of the brain, not imitative copying. Of the thousands of pictures painted every year, very few of them are works of art. Most of them are simply mannerisms. This is entirely different and apart from art, and should not be confused or confounded with it. Similarly with regard to photography. Much so-called art is simply mannerism or a trick of the craft, the use of a particular lens, or printing process." This

may be so; but nevertheless there are among the eight examples of his work with the camera in this number, pictures that if not Art even with the big A, they border closely on it and are too of the highest class. The "Caller Herrin" and "The Mid-day Hour" as examples of his portraiture and landscape, while free from mannerism and trick, but strong in emphasis and subordination, give us at least as much pleasure as ever we derived from an effort of the brush.

Architectural Photography is the subject of the symposium, and, as usual, written by a selection of the men best qualified for the purpose, so that what has not been said regarding it is hardly worth saying. The November *Practical Photographer* is a mine of wealth on the subject on which it treats, and should be in the hands of every one aiming at the best work of the kind.

* * *

CATALOGUE OF THE FIRST AMERICAN PHOTOGRAPHIC SALON.—Believing in photography as a means of artistic expression, as we do, and devoted to its advancement, as we are; we gladly welcome every opportunity given to the public generally and to photographers especially to study the various methods adopted by pictorialists and their varying degrees of success.

Nor are there wanting in this salon certain features that induce us to give it a special welcome. We have always advocated the selection of a jury of painters rather than of photographers, and from what we can learn, the result in this case has shown the wisdom of the choice. Not the method but the result thereof from a pictorial point of view; how far the photographer has succeeded in expressing his expression, is what is to be put into the balance; and surely the trained artist is better able to do the weighing than the, at present, largely untrained photographer. The artist may belong to one or other of the various schools, but the photographer is more likely, as has been too often shown, to be influenced by fads and fancies; and in his leap from the times of $f/32$ and awakening to the necessity for accentuation and suppression, went so far over

the score that "Salon Picture" has come, in the minds of a great majority of even serious photographers, to mean one in which little was left and that little so lacking in detail as to be barely recognizable.

But the jury of painters has shown that photographic pictorialism is not and need not be confined to the extra accentuated and suppressed, that the lens may be allowed to give its best, provided it be confined to the right places; and in claiming such freedom we claim no more than is allowed to the painter who may paint as minutely as Millais or as broadly as Whistler, the outcome in each case being equally a work of fine art. And judging from the catalogue as well as from private information; for unfortunately circumstances prevented our seeing the exhibition for ourselves, there are not a few of both classes of photographic pictures in the salon, gathered from a very wide circle.

An analysis of the catalogue shows that there are on exhibition 346 pictures by 175 exhibitors. Of the latter four are from Belgium; two from Canada; four from Denmark; thirteen from England; five from France; three from Germany; one from Italy; one from Russia, and four from Scotland; thirty-seven in all who are credited with eighty-eight pictures; the remaining 238 coming from 138 photographers from all over the United States. We understand, however, that the 238 pictures by the 138 American exhibitors were not by any means all that would have been passed by the jury and hung, but were all that room could be found for; a thing hardly to be regretted, as, although disappointing to the exhibitors, it is for the benefit of the visitors; while ample to show what the former can do, it furnishes matter for study during several visits from the latter.

Wishing the "First American Photographic Salon" the success it deserves during its perigrinations, and ready in the future to give it such help as we can, we give it "Godspeed."

* * *

THE AMERICAN ANNUAL OF PHOTOGRAPHY, G. Gennert, New York. We have to thank the publisher for a copy of this

interesting annual visitor certainly not behind any of its predecessors; and if for nothing but its many tables, well worth keeping on a handy shelf for ready reference. Over fifty writers have contributed as many articles, many of them being well worth the price of the book; and over 120 illustrations, many of them valuable as hints for posing, composition, etc.

Taking it all in all, we hardly know any way in which a photographer, whether professional or amateur, can spend 75 cents to more advantage than in a copy of this Annual.

* * *

WITH THE CAMERA.—The notes from the Illinois College of Photography continue to tell of success both in learning and in the amusements that add so much to college life. The grand thing in this budget is the annual coon hunt. Here is how the notice concludes, and it tells enough to make one wish that he could

have been young again to share in such fun. "The woods were alive with the enemy and rarely did a bunch of leaves, or knot, or squirrel nest escape suspicion and a volley of shot. After many thrilling experiences the party betook themselves to a sumptuous banquet, and returned in hay wagons to the city." "In Hay Wagons"! The memory to which that does not bring something back is to be pitied.

As an evidence of continued progress we may say that a new electric light and power plant has been established in the college, especially to set the machinery of the engraving department in motion, but also to light the buildings so that the students will be independent of daylight at all times and for all kinds of work. The rest of the circular is devoted to the usual visits from former students, their marrying and giving in marriage, and the general success of all who have passed through the curriculum of the college.

LETTERS TO THE EDITORS.

DEAR SIRs:—I enclose a picture of Sheep, with a light sky and fairly bright light on the backs and yet the sheep nearest (evidently not more than forty feet) so indistinct that the legs are not in evidence. Now I am a country born boy and I have never seen such an effect, or, as an Englishman once remarked: "Not in nachur you know." In the evening and on misty and foggy days the objects nearby are nearly as plain as in a fairly light day, or at least plain enough to be easily seen with most of the detail. I see that a large part of the photos falsely labelled "A Foggy Day," "Gray Day," etc., are simply *blurred all over*. The *near* as well as the *distant* parts are equally dim and blurred. I think that such a representation is not as the lens sees it, not as the eye sees it, and not as the memory or the mind sees it. I enclose two prints *taken* in misty days to illustrate.

You will see that they show the scenes as they were on those days. The nearer parts fairly clear and the others fading out as the distance increases.

Now I am going to impose on you by

asking you to say if you like the "Stained Gown" on page 479, last issue?

And also will you please give me your criticism on it as you would if it were one of mine. Yours respectfully,

WILLIAM H. BLACAR.

While we shall be glad to hear the opinions of as many of our readers on the questions raised by our correspondent as care to write, we shall do our best to make our own clear. The keynote of his trouble is clearly shown by his quotation from the supposed Englishman: "Not in nachure you know." To copy nature "as the lens sees it" is not art, else we might all easily be artists, as he must be dull indeed who, after more or less practice with the apparatus and material now available, cannot produce photographs of practically perfect technique, or practically perfect copies of nature.

Art is many sided; but from our present point of view it means a photograph that shall suggest the feeling, impression, or effect that the artist desires to convey, and the methods of suggestion may be as many as there are men who take them.

It is a well understood fact that the caricatures of, say, our popular men are more readily recognized than would be correct portraits, the caricaturist selecting one or more of the known or attributed peculiarities and by their exaggeration attracting instant attention.

The two prints referred to and said to be taken in misty days are excellent examples of how not to do it, as they do not in the least suggest such conditions; indeed, they are good examples of straight photography with a better rendering of the much to be desired atmosphere than is often seen, but of over twenty, varying in intellect from Sandy, an old darky who, although a grandfather, never could be taught to read, to our parson, to whom I have shown them; not one had the slightest notion that they were meant to represent a misty or even a gray day.

In reply to the last question, if we like "The Stained Gown" on page 479 of our November number, we have no hesitation in saying that we do not. But the fault, to a large extent at least, lies with us rather than with the picture. True, the reproduction is far from good, not as fine as others we have seen, and very far from the texture giving effect of the original. We have often said that we see in a picture just what we bring to it, and because we like or dislike a thing, it does not follow that others may think not very differently of it. Art, as we have said, is many sided, and there are many degrees of art culture, as the appreciations and depreciations of this particular picture have proved; on the one hand, many agree with our

correspondent, while on the other it has met with favor in the salons of both this and other countries.

We cannot, however, comply with our correspondent's request to "criticise the picture as if it were one of his own." Prints coming to "Our Portfolio" are sent for that purpose, but permission to reproduce does not imply permission to criticise, and to do so would be taking a liberty that might be justly resented. Eds.

A Reliable Exposure Meter.

Baltimore, Md.

Messrs. Editors AM. AMATEUR PHOTOGRAPHER:

There was a time in the not very distant past that the would-be users of the Wynne Exposure Meter were so troubled by reason of its unreliability as to feel compelled to lay it aside as practically useless. If I mistake not, your Senior Editor was of the number. The trouble, as is well known, was in the sensitive paper used. Many protests went over to Mr. Wynne, so many perhaps as to bewilder him to the extent that he failed to answer.

Mr. H. Wenzel took the matter in hand with such vigor as finally resulted in the production by Mr. Wynne of a paper which has proven absolutely reliable; at least, such is the character of all which Mr. Wenzel, agent for furnishing the goods, allows to go out of his hands. Upon the advent of this needed change the writer at once resurrected the meter, which has invariably proven correct, has been in very constant use and is invaluable to the photographer.

I. HARMANUS FISHER.

ANSWERS TO CORRESPONDENTS

Questions for answers, matter for publications, and all communications to the editors should be sent to Dr. John Nicol, Tioga Centre, N. Y.

E. Y. COATSWORTH.—It is contrary to rule to speak of the comparative merits, or indeed generally of the merits of any particular apparatus unless in review, and when they are sent for that purpose. Of the camera to which you refer we have already said enough to give all the information required. The automatic focussing ar-

rangement is one in which, knowing the distance of the object to be photographed, it is only necessary to set a slide to that distance and pull the bellows out as far as it will go, when with a click it will be locked. All such cameras are intended to be focussed by the scale, and you, in the beginning, are no worse than your neigh-

bors in being unable to guess distances. But, like them, there is no reason why you should not practice till you can guess with sufficient accuracy. Two or three hours spent in its practice will enable you to come near enough for all practical purposes. With the scale point set at fifty feet, everything from, say, forty and beyond, will be in sufficiently good focus. We may say, however, that while this and all other hand cameras are suited for excellent work in the hands of those who know their limitations and their conditions, for those who have not had sufficient experience the camera on the stand and with the focussing glass is the ideal method for perfect work, as even the experienced hand finds a difficulty in properly composing the picture with nothing better than the finder.

For the highest class of direct work the camera on the stand and the focussing glass is a *sine qua non*. We may add, however, that the camera in question may be got fitted with a focussing screen and plate carrier, and it may then be used on the stand for perfect work, and under all conditions.

A. H. HENDERSON.—The question, "If a photographer can buy only one book what is the best book that he can buy," is a rather difficult one to answer. We know many books that treat each one subject well, but the only one we know that tells a little about everything a photographer needs to know is "The Figures, Facts and Formulae of Photography." It is a kind of "Look Within" into which you can hardly ever look in vain. It can be got from our publishers.

W. B. JAMES.—The best cement for "sticking the edges of films together," presuming that they are celluloid films, is a solution of celluloid in amyl acetate. Clean the image and gelatine from some old or spoiled films and place about 40 grains into a six-ounce bottle, adding four ounces of amyl acetate. Keep in a warm place with occasional shaking till dissolved. It should be about the consistency of ordinary liquid glue, and should be applied to the edges of the films to be united, very thinly, the edges placed together and held there till the menstrum

partly evaporates. This, we believe, is the cement used in joining pieces of cinematograph films when long lengths are required, and answers the purpose admirably when properly done. In cementing transposed stereo films when there is no room for overlapping, the two may be joined by merely bringing them into contact on a narrow strip of the film.

(Mrs.) H. B. SMITH.—We do not understand what is meant by "The cloudy appearance of paper such as workers like Gertrude Kasebier and the Secessionists delight in," and consequently cannot say how it is produced; nor, of course, if it is "fogged paper." We are equally at sea as to whether you should send advertising matter to advertisers direct or to an advertising agency, never having done anything in that line. We should, however, try both.

J. H. DOWNEY.—The speed of a lens depends on the relation that the stop bears to its focal length. If you examine an ordinary rectilinear of, say, eight inches focus, you will find the largest stop measures practically one inch in diameter, and it is said to be $f/8$ because it is one-eighth of the focus. In the same way $f/16$ is the one-sixteenth, or in this case half an inch, and so on through all the numbers, called focal fractions, because the openings are fractions of the focus of the lens. Opticians generally arrange the stops of their lenses so that each succeeding one from the largest down shall require just twice the exposure of the one that preceded it: $f/8$, $f/11$, $f/16$, $f/22$, $f/32$, and so on. There are fractions of these fractions, but for convenience they are generally left out. $f/8$ is the largest stop at which the ordinary rectilinear works, and therefore its speed is said to be $f/8$. Other lenses are more rapid because they work at a larger aperture, some of them as large as $f/4$ or even larger; but they, when stopt down to $f/8$, are no faster than the rectilinear.

To say, for example, as is frequently said to us, that the stop used was half an inch, or the size of a pencil, or indeed any other size, is meaningless; as a stop, say, of half an inch, in a lens of 16 inches, is just sixteen times slower than one of

the same size in a lens of 4 inches, it being $f/4$ in the one and $f/32$ in the other.

In brief, all lenses have practically the same speed with the same focal fraction of stop; and the limit of lens speed is the largest stop with which it works. One lens is faster than another only because its largest focal fraction is larger; thus, an anastigmat at $f/5$ is twice as fast as the rectilinear at $f/8$, but the former stopt down to $f/8$ has then the same speed as the latter.

(Miss) E. J. LOCKE.—For the gelatine coating referred to in the article on printing on china in our May number, both strength and quality are immaterial so long as the gelatine is practically colorless. Soak one ounce in ten ounces of water for an hour or two, and dissolve by placing the vessel in a saucepan of hot water. When quite dissolved and while still warm strain through a cloth and apply with a brush as directed in the article. Before applying the gelatine solution it is necessary to warm the article to be coated, and to keep both it and the solution warm during the coating.

JOHN WATSON.—Formulae for iodide and bromide rehalogenizing for intensification will be found on page 213 of our May number. The same method may be resorted to for reducing the high lights according to a recent authority. Carry the rehalogenizing only to a certain length, so he says, and fix in hypo for a few minutes. Wash thoroughly and rehalogenize through and through and develop as before.

J. H. WILSON.—Thanks for your good opinion. We try to deserve it and know best how far we come short. The Kallitype is both cheap and beautiful, but we have not the honor of its invention; there are more than one Dr. Nicol. The formula you want will be found on page 277 of our June number. Any good paper will do, but we prefer one stout enough to do without mounting and print with wide margins. Masks of thin "needle paper" may be placed between paper and negative without interfering with definition. No, never use them. Fancy masks are an abomination. No also; very much NO. It may be all right for "Sarony," "Gutikunst," or

other very very big wig to use only the surname, but in the case of lesser men it is silly egotism and tends to make sensible men pass their door.

L. LE PAGE.—There is nothing to hinder your making platinotype paper, although, even with your large consumption, we doubt whether you would find it economical. The best work we know on the subject is Abney's "Platinotype, Its Preparation and Manipulation," \$1.25, to be got from our Publishers; or you may find all the information you need in the Photo-Miniature No. 7, 25 cents from Tennant & Ward, New York.

CLYDE R. HARRIS.—We do not approve of running to the patent office with every little improvement that one comes across, generally by accident, instead of looking at such things as debts to be paid to those who have gone before and contributed all you know. We are glad therefore to say you have been forestalled more than a quarter of a century ago, the method often being sold as a secret and as often taken to the patent office, although never getting beyond provisional registration. The first we knew of it was when a photographer, Gurney, we think, came from America to Scotland and tried to sell it, but found the canny Scot too knowing for him. His method of rendering the albumen print translucent was to sprinkle shavings of paraffin wax over the back, place it between folds of blotting paper and pass over it a hot iron; but we had long waxed paper in that way and the transition from the paper to the print had been effected long before he left New York, and for the exposure of his scheme to cover the expense of his trip in *The British Journal of Photography* he never forgave us.

W. L.—"Wholly from a pictorial point of view" the results are not in the slightest degree influenced by the style of shutter, whether roller blind or diaphragm, or whether before, behind or between.

GEO. SWINTON.—Although there is only one point from which the view of the church can be got, a window in the house opposite, and you paid for the privilege of photographing it from that, you cannot

prevent your opponent from photographing it from the same window nor for making and selling the post cards. The fact that he is spoiling your sale only proves that his cards are pleasing the public better than yours. Don't reduce the price, but try and do better than him; use a fancy border, use a better card, or in some way make yours the more attractive and your trade will surely return.

(MISS) SUSAN HOLLAND.—There is no "best" developer for snap or any other kind of shots although some may work faster than others. Unless you have any one that you are more accustomed to than others you had best stick to that recommended by the makers of the plates. In using the color screen with the exposure meter you should find by experiment how many times longer it takes with the screen to darken the test paper than without it, and always give that additional exposure. If the experiment is made in dullish diffused light it gives more time to make sure of the proper tints being obtained.

G. and R. MILLER.—In buying the negatives from the bankrupt estate you could not buy what they could not sell, the right to print from portrait negatives taken in the ordinary course of trade. The glass, it is true, belonged to the estate and you may print from them only to the order of those who paid for the sittings. If you know that any of them were what is understood as invitation sittings for which no payment was made, you are at liberty to do with them as you please.

QUICK AS A WINK.—Flashlights are too dangerous for us to take the responsibility of giving such a formula as you desire. There are on the market plenty that burn fast enough, and you had better trust to some of them than run the risk of making one. A pinch of pure magnesium on a tuft of gun cotton is fast enough for us and we have done good work with that oftener than with the more rapid mixtures.

A YOUNG PHOTOGRAPHER.—Not insufficient washing so often as insufficient fixing is the cause of fading in gelatine prints. Five to twenty is better than the one to twenty that you have been using, and not

less than ten minutes in the bath. If you want to make sure that no hypo is left in the print you should employ the starch iodide test. Boil a pinch of starch in a few ounces of water and when quite cool add a few drops of tincture of iodine which will strike a deep blue. When the prints are supposed to be sufficiently washed, color a couple of ounces of water with the iodide solution to a pale blue and let a few drops of the last drainings from the prints fall into it. If a trace of hypo still remains in the print the color will disappear, and if it remains after a few minutes you make take it for granted that the washing has been complete.

JAMES THOMPSON.—Our objection to the Steadman method of measuring actinism is twofold. It might be of use in the studio where it is not needed, as he is a poor photographer who cannot time his work under circumstances where it is so steady, and it is useless in the field where it is required; as no eye can distinguish degrees of the darkening of printing out paper in small fractions of a second. Then it was shown long ago by Abney that the action of light on silver chloride is very different in its action on silver bromide, so different as to make the former a very insufficient test of the latter. We might add that the two exposure meters on the market are simplicity itself, the exposure of the test paper and the turning of a disc or ring giving all needed information, while both instruments are to be got wherever photographic material is sold.

J. H. MONTGOMERY.—To give you the formulæ and "the method of procedure for dry plate making" would occupy several pages instead of the part of a column at our disposal in answering correspondents, and after many experiments and at considerable cost you would come to the conclusion, as many others have before, that you cannot on a small scale make plates anywhere near like as good as those on the market. If, however, you wish to experiment for the pleasure it gives, you will find all needful information, including formulæ, etc., in Abney's "Photography with Emulsions," to be had from our publishers.

HOME PORTRAIT STUDY.

UNIVERSITY OF MICHIGAN

A CHILD'S DEVOTION.

By Joseph V. Wanach.

THE
AMERICAN AMATEUR PHOTOGRAPHER.

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NO 2

Edited by DR. JOHN NICOL and F. C. BEACH.

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CONCERNING OUR PORTFOLIO.

BY DR. JOHN NICOL.

I want a talk with the readers of *The American Amateur Photographer*, and especially those of them who from time to time send prints to the Portfolio for criticism, in a way somewhat less impersonal than under the editorial "We;" to take them, in fact, a little into my confidence as to why the portfolio is, to me, the only unsatisfactory department of the magazine, and how they may help me to make it better or at least more useful.

The patrons of the portfolio, like photographers generally, may be divided into two classes, those who aim only at the reproduction of nature or natural objects as they are; and those who desire to represent them as they see or profess to see them: the "straight" photographer and the pictorialist. The object of the Portfolio is to be helpful to both, and to what extent it has been so during the now nearly a decade of its existence should be a question of considerable importance. And here I may say at once that in spite of the many letters of thanks, congratulations, and ex-

pressions of benefits received, and few communications of an opposite tenor, the success has not been nearly commensurate with the labor and thought entailed; and it has more than once been a question whether that labor and thought might not be devoted to something of more general value to the readers of the magazine.

An examination of the Portfolio during its earlier years, say, 1886-7 and 8, as compared with the three latest years will let some light on the question. It will be noticed that then little was said about the technique of photography and that little generally by way of compliment, although now and then a print showed flatness from over-exposure. Selection of subject, composition, and suitable lighting, seemed the only matters needing attention, several months often passing without the mention of exposure. It will be noticed also that a greater number of pictures were found worthy of reproduction, the worst of them better than, as a rule, the best of those engraved now. Nor is the

reason far to seek, the *hand* camera had not become so popular nor had the craze for short exposures become so nearly universal as now. But its baneful influence began to spread; a few more years and the work of the *stand* camera became like the proverbial angels visits, few and far between; with the result that selection, composition, lighting and placing, all that goes to picture making in probably three-fourths of all the prints that come have to give way to the declaration that they are worthless from under-exposure. Nor is that all or the worst. I would not mind such coming once; indeed should rather like it if the author did better the next time, I should feel that I was being of use, but again and again and yet again they come from the same hand, each as bad as its predecessor, as if ruled by fate rather than judgment, or although having eyes they could not see.

While it is true that certain pictorialists have belittled technique it cannot be too strongly urged that it is the basis of all good pictorial work, and he who has not mastered it is hardly half equipped for picture making. Let me then urge all would-be picture makers and Portfolio patrons to lay a good foundation, to practice straight photography until they can secure a faultless record, a reproduction of scenes and objects as they are, and then and only then begin to so modify and manipulate as to make them as they think they see them. And surely that is now easy enough with the apparatus and material at command, the former so nearly automatic and the latter so responsive. And in this the Portfolio can be of much use,

its criticisms in that department having an *ex cathedra* flavor or authority, not claimed for the pictorial. In the judging of straight photography, photographic technique, or by whatever name it may be known there can hardly be two opinions, and therefore mine is given with confidence; but when it comes to deal with art, especially with the big A, things are different; and I claim nothing more than the other man, nothing approaching to what I gladly allow to many other men. But I know what I like, and in many cases why I like it as well as what I dislike and the cause thereof; and that I am not altogether alone in my judgment may be gathered from the fact that not a few of the pictures that have found favor in our salons have been the results of my criticism, their authors working on the lines laid down for them.

But Art is many sided, and as I have often said, we see in a picture just what we bring to it. While my likes and dislikes are shared by many, many more perhaps will, with equal justice and judgment, favor a very different style of work, hence there should be room for all shades of opinion and all classes of pictorial expression; the one thing needful being an open mind, an honest endeavor after individuality and if possible originality; and, perhaps above all, sufficient sense not to condemn what we do not understand simply because we do not understand it. Few indeed attain perfect knowledge in art or of anything else, and it takes a great deal of ignorance to enable a man to believe that he is one of them.

In spite of the discouragement alluded to therefore, I shall continue to

welcome you all to avail yourselves of whatever the Portfolio can do for you ; with this reservation however, that you shake yourselves free from the craze for insufficient exposures, I had almost said from snap-shotting ; and indeed I should say as much until you have learned the limitations of the hand camera, or the camera in the hand. The merest tyro need have no difficulty in recognizing an under-exposed plate while in the developing solution. Develop as long as he may there comes nothing where the shadows should be but bare glass, and the longer he develops the more the lights take on the deposit till all, even the lesser lights, become quite opaque. Such negatives are never worth printing, or if printed, should never be sent to the Portfolio, as in future when such prints come I shall consign them to the waste basket, only saying that till you have learned the first principle of the photographic art, the necessity for sufficient exposure, I can-

not spare the time to teach what you can so easily learn for yourself.

And now a word or two to those who send from time to time for "Answers." This department, from the many letters to hand, is of considerable use, and although it occupies much of my time I always gladly make a point of finding the desired information. But the questions are not always such as ought to be sent. Many of them needs only a little thought and the exercise of a little common sense, while others can be found better answered in any twenty-five cent manual than I can find room for in that column. Please then, to make it a rule to first try to find the answer for yourself, the exercise will do you good, and only send to the "Answers" column when you cannot do so. And don't ask me to write privately, I cannot spare the time ; and never expect me to recommend the apparatus or material of any particular maker, that, for a very evident reason, is contrary to rule.

WHAT IS ART ?

From the circular of the Birmingham Photographic Society we reproduce a brief summary of a lecture by the Headmaster of the Birmingham School of Art, Mr. R. Catterson Smith, compiled from notes, we understand, taken by the Honorable Secretary :

The question, the lecturer remarked, was no new one, yet it seemed strange that after all that had been said and written on the subject, after the life

work of great teachers like Ruskin and Morris, we should still be calling out, "What is Art?" The fact is that art is so much a matter of personal feeling that it is extremely hard to give a definition which will suit us all and at all times. What satisfies to-day we cast away to-morrow. That this should be so shows how little grasp the majority have of the subject.

It was Morris who said that we talk

about art because we do not know anything about it. If we "felt" it as an inspiration, made it an act of worship, so to speak, we should know by instinct what was art. This was the spirit of the Middle Ages—before the revival of learning—that time when the cathedrals, those glorious tributes to the spirit of religion, were being built, and the art galleries of the world enriched by some of their choicest treasures. Then art was a serious business; it was a reality, bound up with the daily worship of God. These old painters and sculptors put their whole soul into the visions which they tried to work out on canvas or stone; they were as real as a dream often is to us.

But in time, with the greater spread of learning, there came an increase of ease and of luxury, with increased wealth, and this brought a serious degradation in the ideals of art, which has gone on through the centuries, the bad oftentimes almost choking the channels through which good art was trying to spread its quickening impulse. And so to-day we have an art in which the lower influences seem to be uppermost. Art has lost its seriousness and becomes an affair of pleasure and amusement, of the drawing room rather than of the sanctuary.

It is well, therefore, that some prophet should now and then point the way to better things. Such a prophet is Tolstoy; strenuous in all he undertakes, he is not the least so in his championship of a noble ideal in art. He draws a distinction between two classes of pictures: those painted solely with an idea of pleasure or beauty, and those which bear a definite message, which have in them les-

sons drawn from the heart of the painter.

The lecturer gave illustrations from modern paintings, and placed in forcible contrast "The Emigrants," by Madox Brown, and "The Dreamers," by Albert Moore; the former charged with grim reality in every line, the latter revelling in pure luxuriousness and pleasure. The contention of Tolstoy is that those pictures which are painted solely to give pleasure are bad; the aim of the artist should be to give some expression of individuality, some fragment of his experience for a lesson to others. Let us go back to the ideals of the old-time painters, and let us have a vision and seek to express it the best we can. In a word, it is not colours only we must put on the canvas, but a little bit of ourselves, and if we can do this there is no need to trouble about perfection in workmanship, for we have achieved something far greater than this can ever be. All this is not meant to imply that an artist may not have pleasure in his work. Tolstoy himself would say that the more the artist gave expression to his feeling the more pleasure he would have in his work. This then is his first ideal of art—seriousness.

Closely connected is truthfulness. All art is in need of this virtue, both in conception and execution. To each subject there must be its proper treatment, or a jarring discord is produced where harmony was intended. To tell a lie on canvas is as bad as to utter it with the lips. First we must have convictions and then be true to them.

Third, art should have simplicity. There seems in many quarters an idea

that only great themes should be attempted, if one wishes to achieve anything in the world of art. No greater mistake can be made, for it will always be found that the simpler the subject the wider is its application. The most universal subjects are those which by their simplicity can reach the greatest number; the heroic finds a much more limited auditory.

Again, we must not be imitators or copyists of another's work; too much of present day art is borrowed, sometimes whole themes being thus pilfered and dressed up to appear as new. True art has to pass the test of originality. Perhaps greater than all it must be closely bound up with morals, as those seem to believe who talk of art for art's sake. There is a saying of Goethe's that he who would

paint for princes must live like a prince. Now, as princes have not always been remarkable for the virtue of their lives, this is equal to saying that in art morals do not count—a suggestion which Tolstoy repudiates. All that has been said beforehand applies, of course, to any expression of feeling, of which photography is but one mode.

Surely here also we can apply Tolstoy's rules. We can seek to be serious, to work with a higher aim than merely pleasure. We can try to be something better than mere "recorders." We can be simple, not striving beyond the obvious limitation of our craft. We can be universal, owning no school or cult as our master, feeling that all methods are but differing means to the same end.

PHOTOGRAPHERS CAN NOT MAKE GUM PRINTS.

*Judging of the Jury for the Salon Club.—Being an Answer to
Walter Zimmerman's Critique.*

BY ROLAND ROOD.

MR. WALTER ZIMMERMAN in his critique on the Photographic Salon has again brought up the much discussed question of straight and crooked photography—(if we call one "straight," I suppose we have a right to call the other "crooked")—and has at the same time thrown a challenge to the jury who sat in judgment upon the pictures. Perhaps the challenge may elicit an answer from the jury, and some of them may be induced to tell us in concise terms their reasons for objecting to manipulated work. In the

meanwhile, I, as a painter, will state in a few words and without entering into the philosophy of the matter, some of the questions and thoughts that arise in the minds of painters when they are judging and passing upon works of art intended to be exhibited in an important show.

The first question and thought that suggests itself to them is: "Is this work of art completed? does it express the intention of it's maker? for if it is only a suggestion of what it's maker *intended*, then it had better be returned to him to complete before we

will attempt to judge it." And this same attitude painters maintain toward all art productions sent to exhibitions, be those productions oil paintings, lithographs, carved leather or any other result of artistic expression. I think the fairness of the above proposition is unquestionable and all photographers will agree.

Now what constitutes *completion*? Rembrant, long ago, defined completion as thoroughly as it can be defined in a few words; he said "A work of art is completed or finished when the means employed in it's construction are no longer visible." (The above wording is generally attributed to Whistler, but in truth is only one of those charming little plagiarisms of which that gentleman was occasionally guilty.) Into the philosophy of this law I can not, as I have before said, enter here; but should any one be desirous of going more deeply into the matter, I will refer them to Taine, Locke, etc.

Let us see now how the jury for the First Salon of the Salon Club of America applied this principle in their judging. We are told that they objected very much to gum prints. Why? Because they said "These photographs are masquerading as paintings and must be judged as paintings; some are as good as bad paintings, we admit." Note the use of the word masquerading. It distinctly implies that the *mask* of painting or local manipulation was still visible, that is, that the means of construction could still be seen or felt, for were the means no longer visible, then they, the means, would have become part of the whole, and it would have been utterly impossible for any painter to have de-

tected them. The very fact that many of the gum prints appeared to the jury to wear a mask, means that they were still in the process of evolution from one form of art (straight photography) to another (crooked photography) viz.: that the mechanism showed. Furthermore; the jury said: "Some are as good as bad paintings." Note again, it was not because they were paintings that they were thrown out, but because they were "*bad paintings*."

The jury also said: "Photographers can not make gum prints and work like artists, because they do not know enough; to the photographers their work may look very fine, but to us it looks very poor." Now why did these artists assume this very patronizing tone and tell the photographers that they did "not know enough" to make gum prints? I will explain. On that jury there was not a man who had worked at drawing and painting, namely, local manipulation for less than twenty years, La Farge for fifty. Local manipulation is the art of the painter, he does nothing else. Ask any painter how long it takes to learn this local manipulation, and he will answer you: "About fifteen years." "And if color is not attempted, only black and white, how long"? "Five or six years," you will be told, before even ordinary merit can be achieved; that is, to gain an elementary conception of values and to be able to express form in only a passable manner. Now I ask you, how many photographers, who have worked even as long as twenty years, have devoted five or six years of that time to the study of drawing? drawing from nature I mean. How many of them

would be able to compete with even the poorer illustrators in the poorer magazines?

Can you point out to me, apart from the painter-photographers, more than half a dozen in all America who have any real understanding of painter conceptions of drawing and values? I reply safely, no. Yet these same photographers in the conceit of their ignorance assume that they are capable of coping with one of the most difficult problems all art presents: the problem of combining their own personal touch with that of the camera without being caught in the act. Even a good painter will combine his own touch with that of another painter with the greatest difficulty. So well is the magnitude of this problem understood in France, that many of the famous artists who criticise the work of the young art students in the Parisian schools, refuse absolutely to touch it with their own hands, knowing from experience that the painting or drawing will only look the worse after they have finished. But the photographer hopes to tamper with that marvelously gradated photographic texture, the most wonderful in existence, and with the minimum amount of knowledge produce the maximum result; and when he fails, which he does ninety-nine times out of a hundred (although generally unknown to himself), he is amazed that a painter, fifty per cent. of whose work lies in harmonizing textures and touches, and who has had twenty-five times the experience he has had, and whose very business is the expression of personality through touch, should say "To photographers their work

may look very fine, but to us it looks very poor."

Mr. Zimmerman states that the jury in its selections "included much that was manipulated, although not evidently so"; but in this "although not evidently so" lies the whole gist of the question, for when the means have become lost and have been made to unite with the photographic texture and one homogeneous whole is obtained, then is the work of art complete. Of his own work he remarks: "I was told that my rejected work had been laid aside on account of the jury having discovered certain modifications. The fact was that there was more improving done on the accepted work than on the rejected work." Exactly so, the rejected prints probably showed the work; they had not been improved enough.

I, however, do not for an instant mean to imply that the jury could tell what parts of the prints or negatives had been touched; they probably had not even the slightest interest in doing so; and I will go even further and affirm that the jury frequently mistook straight work for gums and vice versa; but what the jury did do was to *feel* all incongruity of touch whether it was from the hand of man or resulting from the inconsistencies of the lens, negative, developer or printing paper, and they felt these incongruities strongly. When I say they *felt* I speak advisedly, for the large majority of painters rely more upon their feelings than upon their *knowledge*. For technical reasons the photographer must be more conscious of his knowledge than must the painter; it is the habit of the painter to *feel*.

It is illogical to say that painters object to gum, they are nothing but gum and resin and varnish workers themselves; but they claim that if photographers want to do the same business they do, that is gum, then the photographers must go through the same training they have gone through, otherwise failure is inevitable; and it is for this reason that painters as a class, and I am among them, advocate *straight photography*; for in straight photography there is a chance—a slim one, I admit—for a man ignorant of the principles of drawing and the philosophy of touch to do a little something.

And this philosophy of touch! Why! books could be and have been written about it; it is more complicated than all values and tone put together, and yet how lightly the photographer takes it! Remember; a photograph can not be both straight and crooked at the same time, it can not be both a caterpillar and a butterfly in one moment, if it is, it is a cocoon, and cocoons are very ugly.

Mr. Zimmerman's grievances against the jury are many; he deplors the poor showing of the Salon and suggests that "among the rejects there may be a sufficient number of good things, even if more or less manipulated, to constitute a first class photographic Salon." I heartily agree with Mr. Zimmerman in the poor showing of the Salon. From an art standpoint it was one of the poorest black and white shows I have ever had the chance to behold; but when Mr. Zimmerman insinuates that it was in any way the fault of the *artistic* judgment of the jury I must again beg leave to differ,

and I leave it to the reader to judge if I am not right. There were 10,000 entries, of these some 800 could not (owing to the inane American custom laws) be gotten out of the custom house in time to be presented to the jury. That left about 9000. To judge these the jury sat *three* times, about five hours each time, fifteen hours in all. That is, they passed upon 600 per hour, which makes 10 per minute, or 6 seconds for each print! Now I will ask you to experiment for yourself; arrange matters so that there shall be presented to you for your inspection a lot of photographs, *none of which you have ever seen before*, and let them be passed before you at the rate of 10 per minute, and keep this up for several hours!

I think that jury was the most wonderful I ever heard of.

I ran across one of its members on the street the other day, and he seemed to have withstood the strain and appeared to be both sound in his mind as well as in his body. But one thing is certain, either the jury took the whole thing as a joke, or else they were not willing to give the proper amount of time; or possibly it was not their fault at all, it may have been that the management did not sufficiently consider the matter, and did not arrange to allow the necessary number of sittings for a proper judging. Whatever may have been the cause of this hurried judging, I think that it is remarkable that the jurors obtained even the result they did, and that, in the dazed state of mind they must have been in, they accepted *any* of the good pictures; for, as we all know, good art speaks quietly and is lost in a group of noisy and bad work.

But whatever differences of opinion I may have with Mr. Zimmerman regarding that famous jury—it will certainly become famous—I agree with him as to the artistic merit of his work (of which, however, he himself speaks so modestly) and I recommend all to study it.

Before closing I feel that I must to an extent retract what I said about Mrs. Bennett's work in my last article—I too at the press view saw some of the pictures in a lightning fashion. On a second view of her pictures I still feel some of the influence of the Bastian Lepage genre school, but do not object to it as much as I did the first time, and I now rank her quite as high as I do Seeley—although for entirely different reasons—and I think her landscape, No. 32, is a masterpiece.

[As our readers know, we have always advocated the appointment of painters rather than photographers as judges at photographic exhibitions; and consequently, unless the alleged fiasco can be accounted for in some other way than because in this case they were artists, it should go far to make us change our opinion.

But we are naturally unwilling on the evidence of a single instance to

change the opinion of years, and are inclined to think that on Zimmerman's showing, and he should know, being one of the Salon Committee, that the fault lies with that body. We have had considerable experience both as judge and member of managing committees of such exhibitions, but never knew one in which the judges were not instructed as to what they were to judge, or to look for in the prints submitted to them; but from what has been said above and from what we have elsewhere heard, the outcome is altogether inconsistent with such instruction.

Whatever may have been the case, supposing the jury to have been uninstructed, it is hard to believe artists, selected because they were such, should have had the temerity to base their judgment on the photographic quality of the prints submitted to them, and in any case the value of a judgment either for or against 9,000 prints examined, according to Mr. Rood, at the rate of 600 per hour, cannot be great.

Taking into consideration, then, conditions known and suspected, the admitted fiasco is not sufficient to induce us to change our mind in regard to painter judges; but they should be given distinctly to understand that not photography or the method, but the result, and that only from an art point of view, is what they are appointed to deal with.—Eds.]

WORDS FROM THE WATCH-TOWER.

BY WATCHMAN.

I have long believed that the most intemperate of people were the temperance writers and lecturers; but could not without very reliable evidence, have supposed that an association professedly religious like "The Lord's Day Rest Association" could

have outstript the prohibitionists in dishonesty. But "facts are chieftains that winna ding" as the aforesaid Association knows to its cost. It would seem from a report in the *Birmingham Daily Post* that this religious association publishes a periodical known

as *The Pearl of Days*, and that in one of its numbers it contained a photograph of a Stourbridge gentleman *playing at golf on Sunday*, holding him up, of course, as the frightful example. The gentleman was not a Sabbath breaker and did not like to be so accused, even although the accusation came from such good folk, and, as the following will show, let them off too easy in my opinion:

"We the Working Men's Lord's Day Rest Association, the Proprietors of the 'Pearl of Days' Tract No. 282, desire publicly to apologise to Mr. A. V. Moore, of Stourbridge, who is represented in our publication as playing golf on Sunday. The photograph from which the illustration was obtained was taken of him playing on a weekday, and we deeply regret the unwarrantable and improper use by us of the illustration for the purpose of an attack on Sunday golf play. We undertake to at once withdraw the publication, to give a donation of £10 to the Corbett Hospital, and to pay all the costs incurred in the matter.—Dated the 16th November, 1904.—(Signed), Charles Hill, Secretary."

* * *

"A PORTABLE DARK TENT, COLLAPSIBLE, and when flatly folded may be carried in a suit case. Is easily and quickly set up, and provided with sleeves for the arms of the operator so that both hands are free for development, plate changing or other like photographic operation." Such is the description of an invention just patented; and a description of what has been more or less in use ever since the discovery of photography itself. If the inventor had taken the trouble to look over the earlier vol-

umes of photographic magazines, especially during the times of wet collodion he would have found that unless his invention differs materially from those that had gone before, and they were practically perfect for the purpose, he would have saved his cash for a more profitable enterprise.

* * *

MR. JAMES E. MASTERS gives the readers of *Photography* a masterful article on how to do gum-bichromate on the cheap, but omitted to tell them where to find the cheap shops. He says gum arabic should be got for a penny an ounce and urges them not to pay more, but the lowest quotation I find in any wholesale list is one shilling and eight pence per pound, and although I have in my time sold hundreds and hundreds of ounces never one went below the three pence. That, of course, was "picked" gum, "sorts" went for less, but when cleaned from dust bits of straw and bark, etc., the saving was small. Is he sure that it is not senegal instead of arabic he gets? although if that does as well it does not matter, but the former never makes such a limpid solution as the latter, and even three pence is not serious.

* * *

Speaking of gum-bichromate reminds me that at a recent meeting of the French Photographic Society, M. Drouillard recommended a solution of Venice turpentine in alcohol as a size for the paper, as being both inert as regards the chemicals and increasing its impermeability. In recommending "well bleached" Venice turpentine I wonder whether he knows that although turpentine from the larch in the long, long ago *was* sent from the

Alps of Savoy and South of Switzerland to Venice, hence the name, none such has been on the market for many a day, and that the Venice turpentine of commerce is simply a solution of rosin, more or less white, in ordinary turpentine?

* * *

"OUT OF THE FRYINGPAN INTO THE FIRE." A writer in *Le Cosmos*, instead of camphor, recommends the addition of one part of amyl acetate to

four of kerosene for lantern illumination, saying that not only does it vastly improve the light but it also goes far to prevent the objectionable smell from the latter. It may be so on the plea that the greater destroys the less, but of the two give me the kerosene. But why should a kerosene lamp send out a disagreeable smell? It does not if kept clean and free from outside oil, and those who do not so keep their lamps deserve all they get.

NOTES.

CHROMOGENES:—Photographers on the other side have a thousand and one little things that are a comfort and a convenience, but which the lack of a parcel post and the trouble incident to a (in our opinion) mistaken tariff policy prevent our getting. The latest of those desirable little things are the chromogenes issued by the Lumiere N. A. Co. of London. The use of uranium, copper and iron salts in the toning of lantern slides and bromide paper is now general, many shades of red sepia blue and green being easily obtained, and they would be much more largely used but for the trouble of their preparation and the lack of keeping qualities of the solutions. The chromogenes are three bottles of the salts which keep indefinitely, and need only to be dissolved in water to make toning solutions for any desired color or shade. And they cost only six pence each, or 36 cents a set. When will the people arise in their might and show that they are stronger than the express companies or those few whom alone the tariff benefits? Will those of our

readers who may still sit in the darkness of protection please to consider the last sentence blue-penciled as the A. A. P. should have nothing to do with politics?

A PHOTOGRAPHIC THEATRE has recently been opened in London; a miniature playhouse holding 500 and intended, not for the production of dramatic entertainment, but for the reproduction by photography of scenes and players and parts of plays from the regular theatres. It has been erected by the Photolinol Ltd. and is being largely used for its illustrations by the new magazine, *The Playhouse*. Electricity is the source of illumination, a number of Adamson's patent appliances and of the Cooper-Hewitt tubes being employed, enough to make the exposures sufficiently short.

Just why a photographic company should erect a theatre may not at first sight appear, but their manufacture is a kind of sensitized cloth giving excellent prints, translucent enough for transparencies and eminently suited for the large posters in which

actors and their managers indulge, and it is for the preparation of these by photography doubtless that is their object.

AUTO-PASTEL.—Pictorialists cannot complain of being neglected by process devisers. In our December number we gave Rawlins' method of oil printing in which they have almost complete control, and now comes the Auto-Pastel with, if possible, still more. Here is the account going the round of our British contemporaries, from which it will be seen that it differs from true painting only in that the artist removes instead of laying on paint or rather color:

The Autotype Company have just perfected a simple and easy process of direct pigment printing, without transfer. The results are very artistic, and the process will commend itself to the artistic section of amateur photographers who prefer a dead matt surface and breadth of treatment to the gloss and extreme definition of some photographic processes.

The process is somewhat analogous to gum-bichromate, but simpler in its action, and with more complete control in development. It differs in principle from gum-bichromate, inasmuch as the pigment coating, after exposure, becomes completely insoluble in either hot or cold water, and development of the latent image is achieved by abrasion. The pigment film when rendered insoluble after exposure is found to be indurated in varying degrees corresponding with the light and shade of the negative. In development a broad camel-hair brush is employed to abrade the pigment surface, and reveal the latent image in its correct gradations. As may be

imagined, the brush development gives the artistic manipulator enormous control over his picture, and the treatment may be local or general, according to taste and requirements. From the following directions, issued by the makers, the simplicity of the process in its various stages will be gauged: Immerse the unsensitized sheets for one minute in a 5 per cent. solution of bichromate of potash, and dry in a dark warm room. The drying should take about half an hour. Print from a fairly strong well-exposed negative, the time required being about the same as for ordinary carbon printing. Full exposures may be given, as there is great latitude in development. Remove the exposed paper from the printing frame, and allow to soak for a few minutes in cold water. Several sheets may be placed in the cold water at the same time. Next take a tin dish containing water of a temperature from 120 to 150 degrees Fahrenheit (40 to 50 degrees Reaumur). Float the exposed paper face downwards for two or three minutes, keeping the dish moving at the time. Now take the sheet and turn it face upwards, and commence the development by gently brushing in all directions with a three or four inch camel-hair brush, commencing at one edge and working towards the centre. As the image begins to appear, the development may be either local or general, according to the wishes of the operator. On completion of the development the prints are washed in cold water, and are then finished. If desired, they may be fixed by about ten minutes immersion in a 2½ per cent. solution of alum, but this is not really necessary.

SNOW SCENES.—In confirmation of our recommendation of long exposures for snow scenes and never to waste a plate on a subject merely be-

developing solution, and therefore we have pleasure in clipping the following table from *The Photographic News*:

Caustic Soda.	Caustic Potash.	Ammonia (33% solution).	Carbonate of Soda (anhydrous).	Carbonate of Soda (cryst.).	Carbonate of Potash (anhydrous).	Carbonate of Potash (cryst.).	Sequit. carbonate of Ammonia.
80	112	97.14	106	286	188	174	127
1	1.400	.867	1.325	3.575	1.725	2.174	1.587
.714	1	1.211	.946	2.553	1.232	1.554	1.184
.834	1.153	1	1.091	2.944	1.421	1.791	1.307
.765	1.033	.916	1	2.698	1.302	1.641	1.198
.280	.392	.340	.371	1	.483	.608	.444
.580	.812	.704	.768	2.072	1	1.260	.920
.460	.644	.558	.609	1.644	.793	1	.730
.630	.882	.765	.835	2.252	1.087	1.370	1

To use this merely find the heavy figure 1 under the name of the alkali used, and then on the same line in the other columns will be found the equivalents of the other alkalies.

cause it is covered with snow hear what Horsley Hinton says:

Select, then, your snow subjects so as to get interesting effects of light and shade, and do not be content with just any scenes merely because they happen to be wrapped up in winter's mantle. Then, bearing in mind that mere black and white will not do for snow scenes, expose very fully, and use a diluted developer. I would rather have a snow picture with the snow too gray, than the harsh black and white things like fig. 1, which so often do duty. Notice, then, how *blue* the shadows on the snow are, and how ivory or creamy white the snow where the sunlight falls. Do not such color schemes suggest that, even for snow pictures, orthochromatic plates should be used?

THE RELATIVE VALUES OF THE ALKALIES:—One of our most frequently recurring questions is as to the relative value of the alkalies in the

To use this merely find the heavy figure 1 under the name of the alkali used, and then on the same line in the other columns will be found the equivalents of the other alkalies.

The relation between sodium and potassium carbonates is perhaps oftener asked. Taking the crystals in both cases, and running the eye, on the sodium column till it comes to the 1, in line with that in the potassium column .608 is seen; so that, say, 1,000 grains of the sodium is equal to only 608 grains of the potassium salt. The case, however, is very different with the dried or anhydrous salts in consequence of the fact that the sodium contains 12 molecules of water while the potassium contains very little. Looking at the question in the same way, but with the dried instead of the crystallized salts, it will be found that 1,000 of the sodium is equal to 1,302 of the potassium.

POPULAR OPINION OF ART.—The following extract from an article by

James E. Masters in *The Amateur Photographer*, is reproduced for the benefit of some of those who occasionally find fault with some of our illustrations, and with some of the criticisms in our Portfolio; in the hope that it may lead them to a more open state of mind:

Popular appreciation is, unfortunately, no criterion of artistic merit; indeed; I think it may safely be said to be the reverse. The "popular" picture of the year is not as a rule the *best* picture; the latest six shilling novel is preferred to the work of, say, Keats or Tennyson; the song that is "all the rage" is generally trash, and the "musical" comedy is thought more of than the works of Wagner; the Drury Lane melodrama will draw larger attendances than the masterpieces of Shakespeare; and so we find it in practically every branch of art. This attitude on the part of the general public towards artistic matters undoubtedly arises from ignorance; and it is with sorrow we must admit that the same spirit is, to a great extent, prevalent in photographic circles. It is a hopeless task to endeavor to convince a man against his will, and these few remarks are written primarily for the benefit or otherwise of those who are willing to approach the matter in a considerate and unbiased spirit. There are far too many people like the Irishman of the story, who said: "I may be wrong, and am open to conviction—but, bejabbers, I'd like to see the man to do it." Such as these, who cannot or will not understand anything that is new to them and at variance with popular ideas, have not the slightest claim to speak with authority on artistic matters. They seem

to ignore the fact that all art is, or at least should be, catholic, and that therefore they should preserve a greater breadth of mind and opinion than they apparently do. The artistic snob who would, if he could, lead us to believe that he knows everything there is to know relating to art, knows nothing; he who knows anything at all is always willing and eager to learn more.

Water as an Aid to Development.

L. Abington, writing in *The Photographic News* under the above heading; says that while water will not develop a plate by itself, if once a plate is immersed in an ordinary developer and transferred to water, the water "will do the rest." He gives some six or eight different formulæ, adding that one is just as good as another although he prefers pyro, mainly because of the color it gives.

Here are his conclusions:

Having consideration for the limited space I have at my disposal, I do not intend giving any more formulæ. Those of my readers who want more will find them on the lids of plate-boxes or in the 1904 Year Book, pp. 343 to 387. My great secret of successful development is not the formula itself, but the formula and *water*, used as stated in the next paragraph.

First of all I fill a large porcelain dish or grooved tank with water. If a dish be used, its size depends upon the size of the plate used. The dish should hold at least four plates, or four separate dishes of the size of the plate used may be employed. I then mix up my developer in the proper way, as directed by the makers. This

is poured over the plate and development carried on until the first trace of the image appears. The plate is then transferred to the dish or dishes containing water. The second, third, and fourth plates are done in exactly the same way, and, when the fourth plate has been placed in the water, we may examine No. 1 (the first plate). We shall most probably find that it has properly developed; if so, it may be placed in the fixer, but, if not, another dip in the developer will bring it up. We can then proceed with the other plates in the same way. When we get a fair start with this system it is possible to have five—one in the developer and four in the water—all developing at the same time; so, by adopting this method, we get over the work quickly, and, what is most important, have our eyes on them all, watching the progress they are making.

Under-exposed plates give more detail than they would if developed direct, and over-exposed plates can be, to a very great extent, kept in check. The warmer the water the quicker the development, and *vice versa*. It is really wonderful what this simple water bath will do. It is a system of the popular stand development with many advantages.

By this method of development one is less liable to get stained negatives when pyro is used as the developer in the first instance. Stains, I find, are caused by exposing the negatives to the air while the film contains traces of the pyro developer, either (1) by using insufficient developer, in which case the film becomes exposed while rocking the dish; (2) by taking the plate out and holding it to the red

light for examination; or (3) by insufficient washing between developing and fixing. Personally, I like a yellowish negative, and use pyro for that purpose; but if by any chance I require a very quick printing negative I always fix in the following acid alum fixing bath:

Sodium sulphite.....	2 ozs.
Citric acid.....	1/4 oz.
Alum	1/4 oz.
Water	10 ozs.

Dissolve and add—

Hypo	5 ozs.
Water	10 ozs.

But under ordinary circumstances the ordinary hypo fixing bath is quite good enough for me.

Stripping Negatives.

Professor Namias gives, in *Photography*, what is called a new method of stripping negative or other films from the glass, the employment of an alkaline fluoride, but that has not been new for these many years although it is none the worse for that. What is new to us, however, is the use of the basic instead of the ordinary chrome alum for hardening the film previous to the stripping, and we find it a decided improvement.

Two methods are given for the formation of the basic preparation; the first the addition of 20 per cent. ammonia to a boiling solution of the chrome alum till a permanent greenish precipitate is formed; the second the addition of granulated zinc to the solution of chrome alum which takes a few days to complete the change. In the latter case the zinc should be left in the solution, sufficient for the pur-

pose decanted and returned to the bottle when done with. The solution prepared by the hot method must be allowed to cool before use; and so great is said to be its hardening power that in half an hour it will make gelatine so that it will stand treatment with boiling water without expanding.

Here is what he says of stripping with sodium fluoride.

For several years I have made experiments as to the possibility of substituting an alkaline fluoride (sodium or potassium fluoride, not ammonium) for the hydrofluoric acid for stripping. A five per cent. solution of an alkaline fluoride may be kept indefinitely in a glass bottle, and is quite innocuous. For use a little of the solution is poured into a dish of celluloid, papier-mache, or wood, and a little dilute (one or two per cent.) sulphuric or hydrochloric acid is added. The film soon begins to strip. This stripping is caused by the formation between

the gelatine and the glass of a gas, silicon fluoride.

There is no other method which will be found so efficacious as this. The use of a solution of a carbonate or of a bicarbonate, followed by an acid bath, has been recommended, but it will be clear that in this case the gas is given off, not between the glass and the film, by the stripping solution acting on the glass itself, but in the body of the film by the acid and carbonate solutions in which it is soaked, coming in contact with each other. The actual stripping effect of such a treatment is very slight, and its efficacy is not very apparent. If the hardening of the film is very great, it can often be detached without any special stripping solution by merely loosening it with the fingers after putting the plate in tepid water. This method, if simple, is not very sure, for one often finds patches where the adhesion is much stronger, and there is consequently a risk of damaging the thin, tender gelatine skin.

HAND-COLORED SLIDES.

By E. J. GREEN.

We have often said that a photographic slide colored was a slide spoiled, and for exhibitions to the cultured few the saying may still be true. In the more popular exhibitions, however, the monotony incident to a whole series of slides simply black and brown, may be lessened by the occasional introduction of a few well colored slides; and to help those willing to take the trouble to acquire the necessary art we gladly extract the following from *The Photographic*

News. We do not say that the method here set down is the best of the many ways adopted, but is probably the easiest, and we shall give others as opportunity occurs.

Colored slides may not be so popular now as they were many years ago, but even now they have their many admirers, and I have found by experience that there is nothing like a well-colored photographic slide for breaking the monotony of a lantern evening. Some workers when giving

a lantern lecture illustrated with slides make a change by masking differently or toning the slides, but the change that gives the most delight and "brings down the house" is a good hand-colored slide. An ordinary lantern slide may be a beautiful thing, but a continual run of a hundred or two upon the screen does become a bit tiring.

Lantern-slide coloring is easy enough if one has the patience, a taste for color, and a fair amount of skill; and I see no reason why slide makers should not attempt coloring, for no one knows what they can do until they try.

Mr. T. C. Porter showed at one of the London clubs, nearly two years ago, a remarkably fine series of slides, and in the course of his lecture gave some brief particulars of the new method by which he produced his pictures. His system is partly chemical and partly due to brush work. That is to say, he will commence operations with a given subject to be colored, by printing his lantern slide in a tint which he judges to be most suitable to that subject. Suppose, for example, it is a sunset effect over the sea. He will develop his slide as usual, and will then turn it blue by means of an iron solution. In this iron bath the image goes through a succession of changes, printing with the blue tone. The highest lights are acted upon first, and the clouds thereupon turn blue before the rest of the subjects. Very beautiful effects can be obtained by stopping the action of the solution at this stage of the process. Having obtained this blue color which serves as a base, Mr. Porter has recourse to the aniline dyes, which he uses in very weak solution in water. The effect of

this simple treatment of a sunset or sunrise effect over the sea, one of the most beautiful subjects which the photographer is able to secure, must be seen to be fully appreciated. The colors were beautifully smooth to the eye, there were no brush marks visible, no evidence of dabbing with the finger, and a total absence of those marks which sometimes show where one color overlays another.

Mr. Woolens, in a lecture before one of the Northern societies, also recommended aniline dyes for coloring. Several workers now use these, although I prefer the colors. Mr. Woolens stated that he found the following the most useful: Olive-green, dark green, yellow, blue, brown, purple, scarlet, orange and pink. Dissolve these in a little water and dilute as required. In addition you will require two or three small red sables and a porcelain palette, having in it several wells. It is absolutely necessary that you should have a retouching desk in which to place the slides. If a landscape, put it upside down and apply a weak wash to the sky, commencing at the horizon; the color will then flow down and produce a natural gradation. Excess of coloring may be partly removed by washing. A mixture of blue and olive-green, or brown and green, will be found suitable for foliage, and these may be varied at will, either by the admixture of yellow or other greens. At the same time you must be prepared to find these dyes very curious. Some colors will readily mix, while others may appear all right on the palette, but on being applied to the slide prove to be altogether different. One thing must be remembered—that any color must

be applied in a weak state, and repeated washes bringing it up to the strength required. Any attempt at using a strong solution to commence with will in almost every case ruin the slide. Flowers and still-life subjects lend themselves to this class of work, and, perhaps they are the most likely to yield satisfaction. Uranium-toned slides are very difficult to color, because of the repelling action of the film; it appears to be hardened in the process of toning, and will not readily absorb the dye.

My favorite method I will give as near as possible:

Ordinary oil paints sold in tubes are all that is needed, and very few colors are required. Crimson lake, gamboge, Prussian blue, burnt sienna, raw sienna, and ivory black would generally be all that would be required, though, in painting flowers, rose madder will make a valuable addition. It makes no difference who manufactures the colors, because, at the present condition of this line of business, it is hard to find a poor grade of artists' colors on the market.

The lantern slide should be thoroughly dried, and laid, film side upwards, upon a rather large sheet of glass. The glass may with advantage be tilted slightly so that its further side rests at the corners on some books or other objects about four inches in height. Under it a sheet of white paper should be placed to reflect nothing but white through the slide. Fine camel's hair, or, still better, sable, brushes are best; and care must be observed in selecting them that none of the hairs are loose, because should one of the finer hairs float out and dry in the slide, it is

likely to be overlooked until the slide is placed in the lantern, and it appears across the skyline or roadway as a gigantic club or tree trunk.

In coloring slides it is usual to mix the colors with a drying medium, and for this purpose megilp is used. Megilp is a technical name for a mixture of turpentine and drying oil, and with it the color is thinned to the proper consistency by being stirred with the flat edge of a palette knife, and then worked with the point of the brush. Mix up some Prussian blue and gamboge until the proper shade of green is obtained for tinting the trees and foliage; add sufficient megilp to this to make it rather thin, and then with the brush dab a few short irregular strokes over a portion of the foliage. With the end of the middle finger these dabs should be blended together, not by rubbing, but by a series of taps on the paint, each tap removing some of the paint and depositing it elsewhere. In this way a thin shade of green can be spread evenly and uniformly throughout all the foliage. Different shades of green are unnecessary, as the light and shade of the photograph will provide for this, and all we want is the merest tint so that the high lights will be very slightly green and the shadows will show the darker green on account of the lack of brilliancy in their coloring.

The sky may be worked in the same manner with Prussian blue, and if the slide has been made from a negative that possesses one of those characteristic "bald-headed" ones, this defect may be eradicated entirely by coloring, and beautiful white fleecy clouds may be worked on the slide by means of some Prussian blue and a few dabs

with the end of the finger. Commence along the top edge of the sky with a streak of Prussian blue then with the finger dam this down gently, allowing the dabs to become lighter as the sky line is approached, until an even tint of blue, growing paler towards the skyline, is spread throughout the upper part of the slide. Any color that has worked over into the foliage below the skyline may be removed with a clean rag, and if it is desirable to introduce a few fleecy clouds the same rag may be used to wipe out the color in portions of the sky, and the edges afterwards softened by dabbing in order to give a softness of effect.

The trunks of trees can be painted with the siennas and the dirty roads with the same tints, to which a little gamboge has been added.

The fewer the colors one has to work with, the more rapidly he becomes familiar with the effects that can be obtained by mixing them, and in lantern-slide coloring no great detail or accuracy is required. All we want is an even tint, leaving the natural photographic beauty of the slide to show through this. The human eye does not crave accuracy in its representation of natural objects with which it is familiar. Set before it a photograph of a tree, a house, or a flower, and it recognizes in the form and shading of the object what it is intended to represent. It naturally feels for the color, and, therefore, the merest suggestion of color on the different parts more than satisfies its impression, because the eye anticipates all and neglects to observe color where it does not belong, unless the error is glaring. The eye overlooks the omission of color appropriate to certain de-

tails, if the masses around it are properly cared for.

By this I mean that if you have a brown house profiled against a wooden grove, and the brown of the house carelessly or accidentally extends beyond the house line and covers a portion of the trees, not one person in a hundred would ever notice it when shown on the screen, because the eye yearns for no brown color where the green is, nor desires to see any green lapped over on the house, and not expecting it does not see it.

This may be a homely explanation, but it is a fact worth bearing in mind in your coloring slides, and do not risk spoiling a good start by cleaning up some detail where accident or carelessness has rendered an inaccurate following of the outline.

Color work on lantern slides can be done in the evening almost as well as in the daytime, but I would recommend a Welsbach or an electric light for the purpose, and the paper placed under the glass plate to reflect light through the slide to be colored should be of a bluish tint rather than a dead white.

It must be remembered also, as the slides are to be viewed by an artificial light, that the colors will stand considerable debasement without showing it, and I know of an instance where a slide colored in the evening possessed a beautiful expanse of decidedly green sky, and would have been cast aside as ruined had not the lantern in which it was projected failed to reveal this absurdity. I would not advise, however, a tendency to green-blues or yellowish reds just because few artificial lights tell the truth.

The above slide, after doing service for three successive lectures in an oil lantern, came to grief in a fourth after the lecturer had acquired a sufficient capital to warrant him in investing in an acetylene gas outfit. Here the green sky came out clear in all its verdant incongruity, and the French tri-color, flying from the top of a prominent public building in the foreground, struck consternation to the hearts of its patriots by its strong resemblance of the standard of Italy.

The coloring of lantern slides is a simple operation which one will learn

readily by trying it, and I would suggest that when a negative of a landscape or other object is made with a view to converting it into a slide, that the colors of the object be written on a piece of paper, as a great deal of realism can be expressed in this way. The best slides to cover are rather thin ones, and slides made from thin negatives, that show plenty of detail but little contrast, can be more improved by coloring than by any other of the twelve or more faking dodges of intensification, reduction, duplication, etc., so frequently indulged in.

DICHOIC FOG: A FRIEND TO BE USED AS WELL AS A FOE TO BE AVOIDED.

WHO would have thought that the fog, sometimes called red and sometimes green, depending on whether it was seen by transmitted or reflected light; during the earlier dry plate days the plague of the photographer and from then till now something to be guarded against, would prove a friend to be courted and even means taken to produce it when it did not come of its own accord? But, according to M. Fabre, as will be seen from the following which we extract from *Photography*, it has its good as well as its objectionable qualities.

In a paper by MM. Lumiere and Seyewetz, which was translated for *The British Journal of Photography* and printed in this number (page 72), it will be remembered that those experimenters pointed out that to obtain a very fine grain in the image developed on a plate it was necessary that the developer should contain a

solvent of silver bromide. It was for this reason that warm tones on lantern slides are got by the use of ammonium bromide, the warm tone being one of the concomitants of the fine grain. In a communication which M. C. Fabre has just made to the French Society, a somewhat similar topic is discussed, and the author shows how dichroic fog, so far from being an unmitigated evil, may actually be utilized to give warm tones for lantern slides.

Sir William Abney demonstrated a long while ago, says M. Fabre, that a developer composed of hydrokinone with ammonia was no use, because it gave negatives with more or less red or dichroic fog. This fog, we may point out for the benefit of those of our readers who are so fortunate as to be unacquainted with it, is most in evidence in the clear parts of a negative. If a plate which is badly fogged is held up to the light, it will be seen

that the shadows have a deep red color; it is not so visible in the darker parts. This is dichroic fog, and it is so called because it is red when looked through and greenish when looked on, dichroic signifying two-colored. Messrs. Lumiere and Seyewetz have shown that this fog is due to the presence of colloidal silver, and M. Fabre, in the course of an examination of metals when in a colloidal state, was led to investigate the influence of this colloidal silver on the color and on the fineness of grain of a negative.

The first part of this enquiry showed that transparencies of a warm tone could always be obtained, provided there was a small quantity of colloidal silver present. The most practical method was to produce dichroic fog systematically and intentionally during development, and then to get rid of it afterwards, leaving the clear, warm toned fine grain image. This removal M. Fabre prefers to effect after development and fixing are over.

The actual color of the image is settled by the exposure, and is always a warm one when colloidal silver is present. By immersing the slide or transparency in a weak reducer, the fog is easily got rid of, and the result is a perfect rendering of the original negative.

The transparency plate, the brand is immaterial, is exposed for some time behind the negative. The more the exposure the more does the tone tend to a bright or coral red. The developer which follows is suitable for most plates, but some, which have a tendency towards the ordinary form of fog, are all the better if this developer contains also anything up to five grains of potassium bromide. Its

ordinary constituents to each ounce of liquid are:

Hydrokinone	5 grains
Crystallised sodium sulphite.	75 "
Sodium carbonate	50 "
Ammonium bromide	2 "

Such a developer gives on a lantern plate an image with strong dichroic fog; but if the extent of this is still insufficient it may be increased by adding to the developer two or three drops of a solution made by adding two grains of dry precipitated silver chloride to an ounce of strong ammonia.

After fixing and washing, the badly-fogged transparency is immersed in a solution of one grain of potassium permanganate in two ounces of water. It is left in this until the fog disappears, and the discoloration produced by the permanganate is removed by means of a solution made up of—

Water	1 part
Commercial liquid sodium bisulphite	1 "

The transparency is generally beautifully clean after this treatment, but if otherwise it may be cleared by the application of a very weak ferricyanide and hypo reducer, or by a solution of cerium sulphate, or by acidified permanganate. This latter is composed of—

Potassium permanganate.....	1 grain
Sulphuric acid (66° B.)....	1 or 2 drops
Water	2 ounces

This bath, followed by the sodium bisulphite, M. Fabre observes, preserves the warm tone obtained by the development most successfully.

The method, to say the least, is a very distinct departure, although it follows very strictly the lines laid down by MM. Lumiere and Seyewetz.

In view of the lantern season which will be on us very shortly, it is one that is well worth trying, and if some of its results should take a high place

in the *Photography* lantern slide competition, particulars of which we give on another page, we shall be interested to learn and to record the fact.

A PROCESS OF PHOTOGRAPHIC DEVELOPMENT FOR THE PRODUCTION OF IMAGES OF FINE GRAIN.

[As the making of small negatives for enlargement is becoming more and more popular, we gladly reproduce the following result of the researches of M. M. Lumiere and Seyewetz from *The British Journal of Photography*. Eds.]

In a previous communication we indicated two developing substances—paraphenylene diamine and orthoamidophenol—which, used in aqueous solutions with soda sulphite, enabled us to obtain images of fine grain and of an appearance similar to that shown in the collodion process.

In the present study we have examined, firstly, the possibility of obtaining fine grain images with developers other than paraphenylene diamine and orthoamidophenol; and, secondly, have endeavored to determine the condition of this special state of the silver.

Our experiments with the various commercial developers show that simultaneous realization of two conditions is apparently indispensable to the formation of images of fine grain, viz.:

1. Slow development, either by adding restrainers or by dilution of the developer.

2. Introduction of a solvent of silver bromide into the developer. In order to avoid solution of the silver bromide before development of the im-

age, this solvent should not be in too large a quantity.

Chloride of ammonia appears to us to be the most suitable product to produce these conditions, using from 15 to 20 grammes to 100 cc $\frac{1}{8}$ of developer.

Chloride of ammonia slightly dissolves the silver bromide of the sensitive coating, and thus the developer contains a mixture of soluble silver salt and developer. Under these conditions, the developer tends to reduce the dissolved silver which it contains, and we are brought back to the case of wet collodion; simultaneously with the ordinary chemical development a true physical development is produced. The images have the appearance of collodion images. In this case, therefore, it will be understood that the phenomenon arises under precise conditions. It is unquestionably necessary that there be an exactly determined relation between the rapidity of the direct chemical development and that of the formation of reduced silver in the liquid in which the plates are immersed. Moreover, this effect is not produced by all solvents of silver bromide.

Paraphenylene diamine and orthoamidophenol developers, as we have shown, give images of fine grain without the addition of special substances

which restrain development or dissolve the silver bromide, and also yield better images than those obtained by various other developers. We find that with these developers the conditions necessary for the formation of images of fine grain are supplied from the substances composing them. They have, in fact, a weak developing energy, and dissolve appreciable quantities of silver bromide. (We find that paraphenylene diamine developer dissolves 0.140 gramme of silver bromide per 100 c. c., and orthoamidophenol 0.134 gramme.)

If paramidophenol be employed with soda sulphite under the same conditions as its isomer ortho, fine grain does not result, but it must be noted that the energy of paramidophenol developer is much greater than that of its isomer ortho. If in the first the reducing power be lessened by the addition of ammonium chloride, the resulting silver grain is as fine as that obtained with orthoamidophenol.

PRACTICAL CONCLUSIONS.

The best developing formula for rapid emulsions, which gives images of normal intensity and free from fog,

provided always that the plate be sufficiently exposed, is the following:

Water,	1,000 c.c.
Paraphenylene diamine,	10 grammes
Anhydrous soda sulphite,	60 "

This method should be found of great interest for the development of negatives which are to be used for the purposes of enlargement. The grain forming the silver of the image being much finer than that of ordinary negatives, it should be possible to produce enlargements of greater size and with a continuous gradation of the half-tones.

With slow emulsions this new method of development should prove equally interesting, especially in the case of lantern-slides, for by its means beautiful brownish-violet tones are produced which vary according to the composition of the developer. Independently of paraphenylene diamine, in which the relative proportions of the reagents may be altered according to the tone desired, a normal hydroquinone developer may be used, to which has been added from 5 to 30 grammes of ammonium chloride per 100 c. c. of developer, according to the desired tone.

PRINTING ON PLAIN HOME-MADE P. O. P. WITHOUT TONING.

We have always had a weak side to printing on home-made plain paper and have given many formulæ for the purpose. While never having come across anything better than what we used in the early sixties, an arrowroot sized paper salted with ammonium or sodium chloride, sensitized on an ammonia nitrate bath,

and toned with sel d'or, and the practical permanence of which is abundantly proved by pictures in our possession now which were printed then and are, except for a little yellowing of the paper, as good as when made; we extract the following from *Photography* because it gives various shades between black and brown

without toning; and if properly managed will give results probably as permanent.

A printing-out silver paper which requires no toning may be prepared according to the following instructions, which are given in the *Photographische Industrie*. The color of the image will depend largely upon the character of the paper used. Rives papers which are sized with resin will give black tones, whilst papers that have been sized with starch or gelatine have a tendency to give warm, brown tones. Thin paper is preferable to thick, as the fixing bath performs its work more effectively and with greater speed. The following formulæ contain borax, sodium phosphate, and, as an alternative to the latter, tribasic sodium phosphate. When this last is used the sodium carbonate may be omitted. As the phosphate tends towards black tones, and the borax towards brown, it is possible by varying the proportions to obtain any intermediate tone required. Potassium bichromate acts as a strong restrainer, and must be used with caution. When black tones are required absolutely fresh chemicals must be used, but brown tones are more readily obtained when the borax, sodium carbonate, sodium phosphate, and the tribasic salt have been freely exposed to the action of the air.

The salting solution for black tones is—

Water	20 ounces.
Sodium phosphate.....	345 grains
Borax	170 "
Sodium carbonate	85 "
Sodium chloride	45 "

This is to be filtered, after which is added—

Potassium bichromate (10 per cent. solution.... 8 minims

If the solution is protected from the air it may be used until exhausted.

A suitable formula for brown tones is—

Water	20 ounces
Tribasic sodium phos- phate	170 grains
Borax	345 "
Sodium chloride	45 "
Potassium bichromate (10 per cent. solution....	7 minims

And after filtration—

The paper having been selected, cut to size, and the back marked with a pencil, it is floated face upwards for from thirty to forty seconds on either of the above baths. This time will be sufficient for thin Rives paper. A thick paper with rough grain may require from one to two minutes, whilst a thin paper sized with starch or gelatine may not require longer than from twenty to thirty seconds.

Paper intended to give black tones should be dried in the dark as quickly as possible, and protected from the air until used, which should be as soon as possible. Paper intended to give brown tones does not require the same care, and may even be benefited by exposure.

The sensitizing bath is made as follows:

Distilled water	20 ounces
Silver nitrate	1 ounce
Lead nitrate	1 "

For black tones this bath, if acid, as is probable, must be neutralized by the addition of a few drops of a saturated solution of sodium carbonate. The solution, which will become opalescent, must be exposed to strong daylight for two or three hours until the precipitate blackens and subsides. An acid sensitizing bath tends to give

red tones, and may be useful when warm brown prints are required. The solution should be filtered and be divided into two parts. One part is used as the working solution, and a proportion of the other should be added after each sheet of paper is sensitized, to keep the working solution up to strength, as a paucity of silver leads to dull, heavy prints.

The salted paper is floated on the sensitizing bath for from three to five minutes, according to its thickness. It is then removed slowly to allow the surface liquid to drain off, and is hung up in the dark to dry. In damp weather heat should be employed, as it is not desirable that the drying should be prolonged. The sensitized paper may keep in good condition for about a week, if stored under pressure and interleaved with paper which has been soaked in a solution of sodium carbonate and then dried. It is better to sensitize only as much paper as is required for immediate use, and black tone paper in particular should be used as soon after sensitizing as is possible.

The prints are to be washed in two

or three changes of water and fixed in—

Water 20 ounces
Hypo 2¼ "

The whites in thin prints will become pure after about ten minutes' immersion, but prints on thick paper will require longer. If a fresh fixing bath is used for each batch of prints they are likely to prove very permanent, as prints made by the process thirty years ago show now no signs of fading. After fixation they must be very thoroughly washed.

The tone of prints salted by the second bath may be still further modified by fixing in—

Potassium sulphocyanide 250 grains

Should a glossy surface be required, a good and economical encaustic paste is—

Distilled water 1 ounce
White wax cut into
slices 154 grains
Marseilles soap 154 "

The wax and the soap are melted in the water by aid of heat, and form a jelly when cool. A small quantity of this is rubbed over the surface of the print with a piece of soft flannel till the desired gloss is attained.

A NOVEL METHOD OF PUTTING CLOUDS INTO LANTERN SLIDES.

By HARRY HOLT.

The making of lantern slides, fascinating work though it be, has its troublesome and worrying side. One of these is putting in clouds. My method, I think, has the charm of novelty, and I would like to give readers of the "B. J." the benefit of it, if I may. Lantern slides, as we all know (or should know), with blank

white skies, are an eyesore, not to be tolerated for a moment by good workers; nothing looks so bad upon the screen. I will endeavor, to the best of my ability, to describe my method; fairly simple if one does it properly, but therein lies the cause of the worry previously alluded to. It is so painfully easy to do it improp-

erly! Presuming the landscape of the slide is made to your satisfaction—which, with a good worker, is seldom the case—the next “item on the programme” is the selection of a suitable cloud negative (a quarter-plate one). Care must be taken to observe that this, when forming the cover glass, is lighted the same way as the landscape, that is to say, from the same direction. For instance, should the cloud negative be lighted from the right, it will, when bound to the slide, be lighted from the left, and vice versa. Your mind being easy on this score, place the quarter-plate cloud negative in contact with the already-made landscape slide, and observe which portion of it comes most appropriately into the sky portion of the landscape slide, bearing in mind the warning previously given as to the lighting. Now, with a small paint brush, charged with water color (red for choice) paint upon the back of the cloud negative the outline of the landscape lantern-plate seen through it. This is for the purpose of indicating the place to be occupied by a previously unexposed plate, to afterwards form the cloud cover glass. The next thing to do is to observe if the cloud overlaps the landscape. Should it do so, then make another line in paint across the back of the cloud negative to indicate that that portion need receive no exposure; in fact, the portion below this line is eventually covered up to prevent light acting upon it. Now take a half-plate printing frame, with glass in it. The reason a half-plate is used is this, it enables the cloud negative to be moved about, so as to use any portion of the cloud. Take

an unexposed lantern plate and (in the dark room, of course) plate it film downwards, as in printing, within the limits of the painted lines (alluded to above) and put the back of the printing frame on in the usual way. You are now ready for the exposure—not forgetting to cover up that portion below what I had better describe as the “landscape line” painted on your cloud negative, and also mentioned above. Lay the printing frame upon a table, face downwards, and expose. Clouds having to be very thin in density, it will not require a lengthy one. In my experience, half of an ordinary wax match, burnt about six or eight inches above the printing frame, is ample, unless the cloud negative be very dense, which, of course, it ought not to be. An ordinary developer may be used to develop, but the development should only be carried, let us say, a quarter as far as necessary for the landscape slide. When the cloud cover glass is developed and fixed, place it against the landscape slide, film to film, but without permitting the two to touch, as one is, of course, wet; and observe if any portion of the cloud overlaps the landscape, shows through a mountain, house, or tree, for instance. Should it do so, then recourse must be had to a saturated solution of ferri-cyanide of potassium and hypo, which will, if carefully applied with a brush, and not used too strong, effectively remove all trace of the obtrusive cloud. This portion of the work is, however, very ticklish to do and only constant practice and a great deal of patience will successfully accomplish it. It is simplicity itself with what is known as a

"Cirrus" cloud, but when one has to deal with clouds of the "Cumulus" description, it is far from easy. Some workers, however, contend that clouds should be made by reduction in the camera, for, by the contact method, the contention is that they "come out" too big in proportion to the landscape. There may be some truth in this, but I have never at-

tempted it, and I should imagine it would be very troublesome, still more so than the contact method. It is, of course, quite unnecessary to add that the tone of the cloud, when developed, should match that of the landscape. In conclusion, may I express the hope that should any of your readers try my method, they will be successful? —*British Journal of Photography.*

HOW I MAKE CARBON TRANSPARENCIES.

BY WALTER O. PHIPPS.

[Carbon transparencies being now largely employed in the making of enlargements, the following, which we clip from *Photography*, will be both interesting and useful.—EDS.]

The carbon process is one which has always had a very great fascination for me, but I must say that the pleasure I derived from it was greatly increased by the publication in *Photography* of Mr. Bennett's solution for sensitising tissue about a year ago. Until then, the tissue I had sensitised had never given as good results as those which I got on ready sensitised tissue, while this latter, from an amateur's point of view, spoils so soon that it is wasteful, unless a packet can be used up as soon as it is bought. Tissue sensitised according to Mr. Bennett's formula in my hands works every bit as well as the tissue bought ready sensitised, although it is very decidedly slower, and this must be allowed for.

In my own work I use the carbon process for two distinct purposes: For printing from enlarged negatives, and for making the small transparencies

from which the enlarged negatives themselves are made. It is the latter to which these notes refer.

We are told in most accounts of the carbon process that it is necessary to provide the negatives with safe edges, in order to prevent the edges of the prints from washing up. I have never found this to be necessary in actual practice, whether the prints are to be developed on paper or on glass. This is due, probably, to the fact that the pieces of tissue which I use are always the full size of the printing frame, so that the edges of the frame itself serve as safe edges, and to the fact that I sensitise the tissue in pieces about half an inch larger each way than the pieces which are to be printed, trimming the piece to size immediately before printing. This ensures a clean, good edge to the tissue—an important point, as it is always the extreme edge of the piece which is affected first by any adverse influence—and it is, of course, these edges which are most likely to get handled in sensitising, and which are perforated by the pins used to hang the tissue up to dry.

The formula for sensitising is the following one, which may be made up a Winchester at a time. It keeps perfectly, but the used solution should be thrown away and not put back into the bottle.

Potassium bichromate,	750 grs.
Citric acid,	200 grs.
Water,	80 ozs.

To this sufficient strong ammonia is added to effect the change of color from red to yellow. It usually, I find, takes a little over an ounce.

If the negatives from which enlarged ones are to be made are very vigorous, it may happen that the transparency tissue, which, generally speaking, it is best to employ, gives too harsh a result. This can be altered by altering the strength of the sensitising bath and the time of sensitising, but it is simpler in this case to substitute ordinary tissue, either sepia or black. There is less pigment in this, and the resulting transparencies are softer. In every other respect they are quite as suitable. It is usually supposed that transparency tissue has a finer grain than the ordinary tissues, the pigment being ground for a longer time. This may be so, but I have never found any ill-effect from coarseness of grain when enlarging from ordinary tissues.

The tissue having been cut up into pieces $9\frac{1}{2} \times 7\frac{1}{2}$ inches, each piece is immersed for three minutes in the sensitiser, turning it over two or three times to make sure that it is wetted thoroughly in every part. It is then taken out, drained a moment, laid face downwards on a clean piece of glass, lightly squeegeed, and then hung up in the dark to dry. It will usually dry in four or five hours. The

simplest plan is to sensitise in the evening, and the tissue is then dry and in fine condition for use the next morning. It will keep for a week or two after sensitising, but is best used fresh. When any has to be kept it may be put into one of the tubes with calcium chloride, in which platinum paper is stored, or it may be pressed flat in a book, the pieces being put face to face, or in some similar way. This I prefer, as the calcium tube generally makes it so dry that there is a great risk of breaking the surface in straightening out the tissue afterwards.

We have now to prepare the glass upon which the tissue is to be developed. A weak solution of gelatine containing some chrome alum is often recommended as a substratum, or bichromate may be added to the gelatine, the glass after coating being exposed to light. The substratum which I myself use is even simpler, being merely the ready-made Agfa negative varnish. Other amyl-acetate celluloid varnishes no doubt would answer the purpose, but most of them, I should imagine, would be better for thinning either with acetone or amyl-acetate. The Agfa varnish may be used exactly as it is bought. The glass is first thoroughly cleaned, by a liberal application of soap and a nail-brush, rinsed in water a few times, and stood up to dry. When dry, it is warmed, plenty of the varnish is poured on in a pool, flowed from corner to corner in a way that has been described often enough, and then poured back into the bottle and the glass warmed again and stood up to dry.

I have not seen this negative var-

nish recommended for this purpose before, and am told that as a rule such varnishes, on being wetted, float right off the glass. I can only say that such is not my experience. Not only does the varnish withstand ordinary wetting, but it shows no disposition to rise even when extremely hot water is used to force development in the case of over-exposed prints, and it holds the image down, so that I have never had a transparency spoiled by frilling, although I do not use a safe edge.

It is said that by the use of a safe edge, by exposing so correctly that the developing water need not be more than warm, and by using water that has been boiled to free it from air, no substratum need be applied to the glass at all; but I have always had trouble when working without one; and its application as described in the last paragraph is not at all difficult.

The tissue just before use is cut into four, and then placing the four pieces in pairs, face to face, with that angle of each which came in the middle of the piece together, a quarter-plate is laid upon the pile, as a guide, and the surplus tissue on the two sides which formed the outside of the sheet as sensitised is cut off with a sharp knife.

Printing must be carried out with the aid of an actinometer, for which purpose Wynne's print meter will be found as good as any. The tissue sensitised in this way, as already stated, is much slower than ready sensitised tissue, requiring, in fact, about half as long again. But this depends on the color of the tissue and on the make of ready sensitised with which it is compared, so that no very useful

guide can be laid down. The only plan is to make a few tests for one's self.

Development I invariably perform as soon as the print is made, so that should any error in exposure render the transparency not as good as it could be made, it may be repaired forthwith. The tissue is taken from the printing frame and placed in a bowl of clean cold water, at the bottom of which is lying the piece of glass coated with varnish, coated side uppermost. The tissue curls inwards at first, unless it is extremely damp, in which condition it should not be used. It is closely watched, and as soon as it shows a tendency to uncurl, it is slipped into position on the glass, film to film, and withdrawn from the water. Then, covering it with a piece of rubber sheeting, it is lightly squeegeed two or three times each way and placed between blotters under gentle pressure for five minutes. The whole secret of successful work here lies in the removal of the tissue from the water as soon as it begins to uncurl, so that it may go on absorbing water afterwards, and so cement itself, as it were, to the glass.

After it has been left for five minutes it may be developed. Here, again, many fail by hurrying the process. The water should be as hot as can be borne comfortably by the hand; the glass with its tissue is slipped into it and left there for three or four minutes. Then, raising the paper at one corner with the point of a pin, it almost floats off without the slightest risk of disturbing the delicate film beneath. It is laved with the warm water until developed, rinsed in cold water, slipped into a 5 per cent. solution of potash alum for a couple of minutes, rinsed

again for a few times, and stood up to dry.

The result should be a transparency which, when laid on a sheet of white paper, looks much too dark to be of any service as a print, but which, when placed in the enlarging lantern,

shall show every tone in its true value, with no undue harshness or weakness, and shall enable an enlarged negative to be obtained, a print from which shall be a close facsimile in everything but size of a carbon print made direct from the original negative.

RODINAL : AN ALL AROUND DEVELOPER.

BY DR. KALTENBORN.

Probably the best of the modern developers is Rodinal, widely used, the most simple in use, the easiest. Rodinal is productive of strong negatives, never fails, and of great importance is the fact that Rodinal is the most convenient developer on the market.

Pyro, Hydrokinone and other developers one buys in substance, in form of powders, and one is obliged to make a solution of them. Of course solutions of these developers can be bought, but these solutions are not concentrated. One buys a large bottle with but little developer and much water. That is not economy. Then for use these solutions stand but little dilution. Therefore, as Rodinal is diluted with 20 parts of water, it is four to five times more concentrated than the solutions of the other developers.

Rodinal keeps excellently, better than the less concentrated solutions of other developers.

As a rapid developer Rodinal develops quickly. By using a normally diluted solution development is finished in four minutes. The negatives have a great density in the lights and are clear in the shadows.

I do not know any kind of dry plate for which Rodinal cannot be used,

either for negatives or for transparencies. Also I find Rodinal suitable for all kinds of films. Striking results can be obtained with Rodinal on bromide and gaslight papers. With these papers Rodinal gives a pure warm black tone.

Now for the methods of using Rodinal. For a normally exposed negative, Rodinal must be diluted with twenty parts of water. Over exposed negatives are developed in a developer composed of one part of Rodinal and ten to fifteen parts of water, added to which is a 10 per cent. solution of Potassium bromide. In case of under exposures one dilutes Rodinal with thirty to forty parts of water.

Rodinal produces fog or veil to a less extent than any other developer. To sum up the advantages of Rodinal in comparison with other developers, we find that no developer is capable of such general application. Who has once used Rodinal, and again plagued himself with the old Pyro? Or who, who has been obliged to use a separate developer for negatives, transparencies and developing papers, will not proclaim with me: there is no doubt Rodinal is in the front of all developers.

HOW TO MAKE HALF-GUINEAS.

BY ONE WHO MAKES THEM.

Notwithstanding all that has been written of what does and what does not constitute an amateur photographer, we hope none of our readers object to making a few dollars out of their photography when they can; and therefore for their encouragement we clip the following from *Photography*, our London contemporary.

"It's all very well for the photographic papers to tell the amateur that he can earn money by press photography," said a city clerk to me the other day, "but how is a busy man to spare the time to do it?"

To which I replied that I fondly imagined I was fairly busy, and yet I contrived to earn many an odd half-guinea by press photographs. After all, the best answer to his query is to give a few actual examples of how the said half-guineas were picked up. A pennyworth of practice is better than a pound of theorizing.

During my lunch hour, when I was in business near Fleet street, I used to take an occasional digestive stroll on the Embankment. One month the Embankment was being relaid at the usual leisurely pace of the British workman, and the papers were full of letters of indignant protest from the delayed public. I took my camera to the excavations, and snapped one of the workmen, who was lying fast asleep on his back on a heap of the upturned sand, snoring. The picture, labelled "The Embankment 'Up,' and Likely to Remain So," appeared in a popular weekly, and in due course I received a check for ten and six in return for my lunch hour's trouble.

Another day, when I was on the Embankment, I saw a number of gutter ragamuffins playing round the steps of the Needle. I posed them on the steps and between the paws of one of the adjacent sphinxes, and photographed the queer group—the great solemn face of stone above, and the grinning faces of grime below. This appeared in the same weekly. Another ten and six.

Passing through Trafalgar Square one

day on the top of a bus I observed that the lions were being scraped and repainted with a preservative. I made a mental note of the fact, and returned later with a camera and photographed the operation proceeding on one of them. This was called "Landseer's Lions Having a Wash and Brush Up." Another half guinea.

A new type of hygienic-artistic dress which I heard was likely to come to the front was likewise photographed and published. Some odd Bibles were also taken by kind permission of the owners, and have sold repeatedly. (They show mainly examples of queer misprints, and are, of course, taken open at the place where the misprint occurs.) I have made at least ten guineas out of these from time to time.

The above examples, recalled at random, were all done in town and at intervals between my ordinary work. When on holiday it pays equally well to keep one's eyes open. I have made many a guinea out of photographs taken when away from home. During a fortnight in the Isle of Man one year I photographed a regatta (several half-guineas out of this from different papers), a supposed "haunted" church (two half-guineas), an Elizabethan clock at Castletown (two half-guineas, one of them from an American technical watchmaking paper), some scenes of tripper life at Douglas (not very profitable, only a guinea and a half for about a dozen, but things of this sort do not go well with magazines nowadays), a folding bridge at Peel (a guinea and a half), Hall Caine's House, and Hall Caine himself (several half-guineas).

I should not mind guaranteeing that wherever I spent my summer holiday I would find some curio of local (but not of outer-world) fame from which I would rake in the inevitable half-guinea. When a man tells me that he cannot make pocket money by press photography because he never gets the chance of anything unusual to take, all I can say is that he must be

blind and deaf. I admit that at first the task seems hopeless. But it is simply a matter of habit. Watch the illustrated papers, cultivate the "journalistic instinct," and keep your eyes and (more important still) your ears open. Keep the camera always loaded with fast backed plates. See that you have a reliable shutter and a fast lens. Practice getting the very most possible out of under-exposed plates, and get into the way of working very rapidly, and never dawdling. If you cannot write articles, learn at least to be able to write a paragraph of plain statement. Put your name and address on the back of each pic-

ture (which is preferably on P.O.P.), and enclose stamped-addressed envelope, the right size, for return in case of rejection by the editor. If the picture is accepted send in a bill for it if you do not receive a cheque immediately, charging ten and six for the "right to reproduce so and so in one issue of the so and so magazine." If a cheque comes, and on the receipt it says "in payment for complete copyright. . . .," cross out the words "complete copyright" or "copyright" and replace them by the words "right to reproduce once," initialling the correction. Anyway, always insist on being paid.

OUR PORTFOLIO.

Prints for criticism; only one at a time and only once each month; to be sent to Dr. John Nicol, Tieoga Centre, N. Y. The coupon found in our advertising pages must be attached to the back of each print.

1875. DR. F. O. WEEKS.—"The Last Days of Summer" might more appropriately be called the last nights, the whole of the lower part of the print being simply black without a trace of detail. It is a case of much under exposure and does not appear to us as worth printing; even the clouds, that sometimes make a picture in spite of a lack of interest in the landscape, are here in unartistic masses, more like a result of cotton wool, and neither above or below is there a trace of suggestion of more than is seen.

1876. T. J. MORGAN.—"Undecided," a few sheep looking at the interloping photographer and apparently "undecided" whether or not to take to their heels and run away, is a print from an under developed negative, and of a subject hardly worth photographing. Except for the backs of the sheep all else is one unvarying shade of about half-dark, and although it includes a distant hill there is not between it and the immediate foreground a trace of atmosphere. As the exposure seems to have been sufficient a longer development might have given the desired contrast and would certainly have been an improvement; but we cannot see anything in the subject that should have made you think it worth a plate. See answers.

1877. O. HOLMES.—"Sunshine and Shadow" is a good photograph of a subject not worth photographing, a good photograph, we mean, of the record variety without a trace of atmosphere, the most distant objects being as well defined as those in the immediate foreground; and without one object being of more importance than another. But good as it is, it would have been very much better of a longer exposure, the lights being much too high and the darks much too deep, both very much more so than ever they were seen in nature; and nature is the thing to be looked to in record work. Again, such small prints, whether record or pictorial, should never, or at least rarely, be printed on such rough paper, especially in a case like this where detail is of importance.

1878. E. S. KING.—"Curiosity," a small flock of sheep with one in front as if the guardian of the rest and intently watching the photographer, while not in any sense pictorial, might have been a fair record of fact but for lack of sufficient exposure. Surely you must see the effect of the utter blackness of the trees in the distance and even in the shadows on the sheep; while instead of the soft, beautiful, woolly texture given by suitable exposure the parts of the sheep in direct light are simply white

suggested trimming would also improve the composition to the extent of giving the figure more space in front, always desirable in the case of a figure. In toning, however, we should prefer a shade less red, more a true sepia, but taking it all in all it is quite up to your usual mark. We are glad to hear of the advantage of our late introduction of your picture into our pages, —the reception of such excellent work always gives us pleasure, and it was well worthy of the place it got.

1880. G. E. FITCH—"The Old Homestead" is an excellent photograph of an interesting old building with only one fault, occupying too much space, or rather a lack of its surroundings to give it additional character. It is quite refreshing to get a photograph from a properly exposed negative, as this is, and it needs only a figure to complete the suggestion of the light of other days. We like the printing method very much, it is the nearest thing to an engraving that we have yet seen both in color and style, and for storing in the portfolio nothing could be better, especially had the paper been a little heavier.

1881. H. W. DURGIN—"A November Day" is a bit of delicate work more like a dainty pencil drawing by the practiced hand of a lady than an ordinary photograph and that would have been still more effective printed square than under an oval mask as it is. We never see the use of such masks without feeling that they had been resorted to to cover some blemish in one or other of the corners of the negative. The toning down of the sky is an improvement, only that it is so toned down has been made evident by protecting the trees on the left, and any such modification should never be seen. Nor was there need for their protection, as they could not have been made darker by it, and so it should have been carried right down to the horizon. It is a dainty little drawing without claim to the pictorial, but belonging to the record or the reproduction variety of photographs, and not the less valuable on that account, the record of fact being quite as important as the pictorial any day, and perhaps more so, as while those that enjoy

paper. We say to you what we have said a thousand times to others, you cannot make a photograph worth looking at without sufficient exposure, which in this case should have been exposure for the shadows and the trees in the distance, probably three times as much as it got; or the same time with a lens three times as rapid.

1879. CARL KREBS—"Noon-Day Rest," trimmed from 4 x 5 to $3\frac{1}{4} \times 3\frac{3}{4}$, is a little too nearly square for our taste, and would be better of another quarter trimmed from the left side. It is well worth enlarging to even larger than you propose and would make a fine picture of, say, 12 x 10. The

the truly pictorial are in the tens, representations of nature are admired by the thousands.

1882. LYDIA M. WHITE.—"Among the Thousand Islands" is a fine selection fairly placed, but rendered almost worthless by under exposure. You never saw either the sky or the St. Lawrence under it so white, nor the trees both on the right and left half so black; and the pity is all the more that a longer exposure would have given a picture to be proud of. Surely you see as well as we the absurdity of representing the beautiful foliage as black as midnight, and cannot wonder at our getting tired of such absurdities, knowing, as we do, that they arise simply from the craze for rapid shutter exposures on subjects and under conditions that only time exposures can deal with. Please don't think we are too hard with you; the surgeon feels the use of the knife sometimes more than the patient, but he knows its necessity, and when you learn that you cannot make a photograph worth looking at without sufficient exposure, you will thank us for helping you to the knowledge.

1883. H. E. JONES.—"Blodgett" (A Bitter Root Canyon). This is, as most such photographs necessarily are, simply a record of fact, a photograph of masses of rock that in this case convey no idea of their surroundings, or give no notion of their relation to other masses. From a geological point of view, the photograph might be of use, but there is too little of it to show that it is part of a canyon or indeed of anything else. It is, however, a good photograph, as far as it goes, but the leaden color of the tone is far from pleasant. Photographs of canyons should always show something of the nature of those immense natural chasms, such small bits as this, as we have already said, being merely geological specimens, valuable in themselves, but showing nothing of the canyon of which they form a part.

1884. W. H. CRAIG.—"A Winter Morning in the Park" is another of those subjects that but for the snow would not have been thought worth a plate, and when, as here, the photography is also at fault, matters are still worse. A bare foreground of

red, with lighter patches extending nearly half over the space, and behind nothing but trees that in the negative must be bare glass, as they are in the print as red as the paper could be made, the color being that of an untuned image just as it came from the fixing solution. But for the white sky we should have said the negative had been under developed, and therefore we are shut up to very much under exposure, you evidently having forgotten that in snow scenes it must be for the shadows as well as in others. Intensification would give the foreground more of the appearance of snow, but nothing would improve the trees, and the contrast between the black of them with the white of the properly developed snow would make the print worse than it is. Snow scenes with trees *must* have an exposure sufficient for them and development *must* then be tempered to suit the snow. And to that advice we are tempted to add, never photograph a scene because it is covered with snow that you would not have considered worth photographing without it.

1885. W. H. LUCKHAUPT.—"The Hill-side in October" is somewhat of a puzzle, not as to the subject, for that is seen at a

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UNIV. OF MICH.

WINTER MORNING IN THE PARK

W. H. Evans

glance, but as to just what induced you to photograph it; and how you could have been satisfied with a print without contrast or any attempt at light and shade, nothing but an even dull, reddish brown, and without objective point or anything of more importance than another. Printed on a different paper on which the detail could have been better rendered, it might have been of use to an artist as a "bit" from which to fill up a vacant corner, but as a photograph for its own sake it was not worth photographing and now that it has been photographed the negative is not worth printing.

1886. F. F. SORNBERGER.—"February Moonlight" needs the title, as without it nobody could suppose that it could be represented in this way. An almost uniformly dark print with two darker trees, and from certain depressions in the foreground suggesting footsteps in the snow, leads to the belief that it is a print from a very much under developed negative made in a rather dull day,—a "grey-day" negative with sufficient light to cast shadows, but not to us, at least, in any sense suggesting moonlight. And yet we like the picture, like it very much, but more, much more for what it suggests than for what is seen. Its only serious fault is the entire lack of atmosphere, the distance being as sharp and well defined as the extreme foreground, a fault all too common, and one that might in many cases be avoided by the use of larger stops, $f/8$, for instance, instead of something very much smaller.

1887. W. J. MCGUFFAGE.—"The Laundry" has got too short an exposure to be worth criticism; never was laundry so dark in the shadows with such illumination everywhere else, and surely you must see the cause as well as we, nor can you help feeling that the extra white in the lights if given to the darks would have made the print just right. Our aim in the portfolio work is to help, but it is hardly fair to occupy so much of our time to tell you what you must without our telling see for yourself. The other fault is the placing of the head so high, it gives to the figure an appearance of being half as high again as it should be. You might have gone further

away, or if that was not practicable, shown less of the clothes basket, it was not necessary to show so much. The horizontal line of the ironing board is also a fault, and would have been better at an angle. The only part of the print really fine, and it is a gem of light and shade, is the part of the cloth hanging in front of the ironing board, an inch and a half by an inch; and it is well worth cutting out and keeping as an example of the highest class of photographic work.

1888. W. F. SCHMIDT—"Forest and Stream" is a fine selection of a beautiful subject made simply worthless by under exposure. The stream and its banks and even the sky are simply white paper, while every part on which direct light has not been falling is equally dark. If ever a subject needed exposure for the shadows and development for the lights this is one, and your exposure has been so short that long before a trace of detail in the shadows appeared the lights, from the highest to what should have been the lowest, became, in the negative, perfectly opaque. As we said of 1887, we cannot understand why you should send this, as you must see its fatal fault as well as we.

1889. V. A. DOWSLAND—"Willows in October" is a good photograph of a subject that we should not have thought worth

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WILLOWS IN OCTOBER V A. Dowsland
UNIV OF MICH.

No. 1890

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Theodore C. Walker

1899. J. C. WILSON. "Unnamed" is rather an unusual title, but we hardly know what else you could have given. What we have out of the selection of 1899 applies equally to this, although the photography is not so good, indeed, the definition is such that it is hardly possible to guess as to the material of which the picture is composed. And yet we rather like it. Not for anything it shows, but for what it suggests, and there is a mystery in the darks under the great tree on the left that affords room for whatever we may bring to it. But, from a technical point of view, the picture is flat, wanting in that contrast that gives vigor and life to a composition, and which, a different lighting, or even a longer development, might have given.

1891. W. E. MARSHALL. — "Come, Duckies," a genre picture in which a boy is sprinkling grain to some ducks, with two women and a child looking on, is very much better than the average of such attempts at this rather difficult class of work, although the three figures are rather too closely bunched in a line on the left. It is a pity, however, that such a small photograph could not have been made sufficiently sharp for enlargement, as that is the only thing that they should be considered fit for; and those who use cameras that focus only by scale can never be sure that they will get anything worth the trouble incident to their production till they have learned to accurately estimate distance.

1892. F. D. M. "Pyramid Creek" is so good, what we have of it, that it is a pity that you should have so masked the negative as to give only an oval of a shape too long to be satisfactory. It is an example of first class photography and if printed in

the ordinary form the full size of the negative would have been an excellent example of first class "record of fact," a phase of photography quite as important as the pictorial. Just why you should have masked it down to this size and form it is difficult to understand, unless there was a flaw in the negative that made it necessary. On this supposition only can we forgive you for doing so.

1893. HENRY BERGER, JR. — "The Old Cotton Woods" is a fine selection, a beautiful subject that might have been a fine picture, but is little better than a lost opportunity. In the first place, the whole effect is weakened by placing the horizon line exactly in the middle of the composition instead of an inch lower, as it should have been, and thus cutting off a portion that it would have been better without. Then there is not a trace of the much needed atmosphere, the extreme distance being as well defined as the immediate foreground, indeed, a good deal better, and the whole as sharp as if taken with an aperture of $f/64$. A more serious fault perhaps is the unnatural blackness of the whole of the left side of the picture, occupying about three-quarters of the space, everything in shadow, in fact, and while it beautifully differentiates the middle plane, that purpose could have been quite as well served without making so much so black. Insufficient exposure is the cause, and you will never secure anything like true values till you learn how to expose sufficiently. In spite of those serious faults, however, we like the print, and while mourning over the "might-have-been," go to it again and again, each time getting new pleasure.

But why not attend to the instructions at the head of this column, and especially why mount on such a large card? A $6 \times 4\frac{1}{2}$ print on a 14×11 mount, and to come through the mail is absurd, even if Uncle Sam's messengers were less careless than they are. We don't consider the mount in our estimation of the print, and although we prefer them mounted there is no need for margins of more than an inch or so, especially as the first thing we do with such as this is to apply the scissors to all that go to the engraver.

No. 1891

UNIV. OF MICH.

THE OLD COTTON WOODS

Henry Berger, Jr.

NOVEL PRIZE PHOTO CONTEST.

The Civic League of Natick, Mass., in their work of gathering a collection of photographs from which to make sets of lantern slides for lectures on town and village improvement, are offering the following cash prizes:

1. For the best pictorial account of the life of any town or village, \$25.00; second prize, \$10.00.

2. For the best pictorial account of any particular phase of the life of a town or village, \$10.00; second prize, \$5.00.

3. Honorable mention for any feature of special merit, prizes from \$1.00 to \$5.00.

Photographs should reach the secretary not later than the first of April, 1905, and will be received with the understand-

ing that the league may use them for the purpose of making lantern slides. Pictures from those not intending to compete will be welcomed. The committee will also be much obliged if it is allowed to keep photographs as part of a permanent collection.

Each photograph should have on it the name of the person or organization presenting it, the name of the town and such statements in regard to its subject and the circumstances under which it is taken as may be necessary to make its significance understood.

Address secretary, Civic League, Natick, Mass., for further particulars.

OUR TABLE.

Books for review and apparatus and material for examination and report to be sent to Dr. John Nicol, Tioga Centre, N. Y.

FOCUSsing MAGNIFIER AND SPIRIT LEVEL. We have to thank Taylor, Taylor & Hobson, Ltd., the well known makers of the almost better known Cooke lenses, for one of each of these most useful additions to a photographic outfit, useful under any circumstances, and for some phases of photography absolutely essential.

The focussing magnifier, more generally called the focussing glass, where straight photography is the aim, small negatives for enlargement, or negatives for lantern slides, enables the photographer to get with ease the perfect focus so necessary; and which, unaided, especially in dull light or when the eyes are not so good as they once were, is so difficult. For ordinary purposes the glass is simply held against the focussing screen and the magnification is such as to make accurate focussing easy, but for the highest degree of refinement in focussing, a different method is generally resorted to, and for this the magnifier is essential. It is the focussing of the aerial image, and for that purpose a disc of microscopic glass is cemented by Canada balsam on the ground side of the focussing screen, the balsam filling up and so destroy-

ing the roughness of the glass. The image formed in the focal plane of the lens is under this condition invisible, but becomes so in the focus of the magnifier, and when it is adjusted to that of the lens a focus that is practically absolute is at once obtained.

The focussing screens of all our cameras are so fitted, the first, according to our notes, being in 1863, and, on the recommendation of Shadbolt while editor of *The British Journal of Photography*, if our memory serves us right, used with a Huygenian Eye-Piece ever since. But the Taylor, Taylor & Hobson Focussing Magnifier answers the purpose better, is more convenient and much cheaper. In appearance it is a miniature telescope, bell-shaped at the objective end, thereby giving a wider angle of view and making it easier held against the focussing screen. The slide gives it portability, while a set screw enables it to be adjusted to suit the focus of any particular eye.

"Brass and glass men" are sometimes spoken of disrespectfully in the microscopic world, but we have a fellow feeling

for them, and think that he that does not delight in things of beauty loses half the pleasure of life. And the Focussing Magnifier, like all the work of the firm that makes it, is a thing of beauty, and so admirably fitted that there is a real pleasure in the drawing in and out of the slide. Wherever fine focussing is necessary a focussing glass is equally so, and we cannot imagine anything more suitable or more beautiful than this Focussing Magnifier.

THE T. T. & H. SPIRIT LEVELS. What has been said of the workmanship of the magnifier applies equally to the levels. They are things of beauty as well as of accuracy, and being tested under considerable pressure, as well as allowed sufficient time for ripening, there is little chance of the bead or bubble becoming larger and larger by degrees until it disappears altogether, a not uncommon experience. They are in four different patterns and in both bright and black finish so as to suit all tastes and various methods of fixing in or on the camera; and while the pure pictorialist may not need such aid, a level is essential to the architectural photographer and a decided advantage under various conditions. It costs little either in cash or trouble, is never in the way, and sadly missed when really wanted.

* * *

THE PRACTICAL PHOTOGRAPHER. The December number of this excellent magazine is as usual a welcome visitor, although it treats of retouching, a thing that has done more to bring photography into discredit than anything else connected with it. Not retouching *per se*, perhaps, but the abuse of retouching by those, and their number is legion, who never should have been allowed to put pencil to negative. J. B. B. Wellington is the pictorialist selected for appreciation, and, judging from the eight examples of his work reproduced, he deserves all the good things said of him. His "Broken Saucer" and "Eventide" are examples, the one of *genre*, the other of landscape, well worth working up to; not perhaps in what is now being called the salon style, but a style that will last as long as photography. Nor are many of the other illustrations far behind, making the num-

ber well worth more than ten times its cost as studies alone.

But retouching has come to stay, and so it is better to learn to do it well than to trust to inefficient hands, and so for that reason the number is well worth having. He must be dull indeed who cannot learn something from the writings of eight or ten of the best authorities on the subject, nor can those who have anything to do with retouching spend twenty-five cents to better advantage.

* * *

WITH THE CAMERA, the notes from the Illinois College of Photography, contain nothing of special interest this month, being confined almost exclusively to a list of visits of former students, several examples of marriages arising out of the intercourse between the male and female pupils, and the satisfactory assurance that all who have left to begin their life work are doing well; one especially, a student of 1902, who writes asking for five assistants, or workmen, as he calls them. That surely is a good sign, as he knows that none of them are likely to be so ignorant as one of which a writer in a contemporary tells. The said writer was out photographing a landscape, having as a companion a professional assistant of many years' experience, and after having focussed the subject the assistant asked him what exposure he should give, and on being asked what were the conditions as to plate stop, etc., got this answer: "O, I'm using a professional plate with this hole," holding out a Waterhouse stop; and that was all he knew of the conditions which guided exposure.

* * *

THE AMBASSADOR. The "Quarterly" published by the Niagara Paper Mills, is, as usual, an object lesson to printers and all who love high-class printing, both in arrangement and color; the very wrapper in which it came being a symphony in grey green and orange. Nor should the reading matter of the *Ambassador* be neglected, the story of the search of the King for happiness carrying a useful moral; while the continuation of the early history of paper making is of considerable interest. Five cents sent to the Lower Town of Lockport,

N. Y., will bring it and the money will be well spent.

* * *

A STOCK OF NIGHTCAPS. We have to thank, and we do it most heartily, G. T. R., who describes himself as "a much helped reader" and says, "While the 'nightcaps' may not please you as well as the 'mountain dew' of your own native land, it is better than can be produced in any other

Co. Their handsome booth in the Liberal Arts Building proved an excellent advertisement, the sterling quality of their products being amply shown by the display of negatives, prints and transparencies. During the week of the P. A. of A. convention, the Cramer factory also kept open house and many photographers saw and wondered at the perfect system and perfection of details which pervades throughout and is

CRAMER EXHIBIT, ST. LOUIS WORLD'S FAIR.

State in the Union;" the State being Kentucky and Covington the city or town from which the express package started. We shall bring the new year on it and wish him many happy returns of the day.

* * *

Whether the city of St. Louis will ultimately benefit from the presence of the World's Fair, remains to be seen. Certain of its wide-awake manufacturers will do so at any rate and none more worthy than our friends the G. Cramer Dry Plate

responsible for the unvarying high quality of the immense output.

* * *

ON A VARIETY OF SUBJECTS.—From Henry Wenzel, Jr., American agent for the Wynne Exposure meter, comes a neatly printed circular or folder with the above title, reprinted from his article in the American Annual, every one of which should be of considerable interest to the photographer generally and the amateur especially. It is becoming daily better and

better known that only by *correct* exposure can the highest class of negative be produced, and this circular will, better than anything else we know, help them to it. And not with lenses only but also with the much more difficult pinhole apertures, all of which may be said to be so simple that he who runneth may read. A two cent stamp and a stamped and addressed envelope sent to 237 South Fourth Street, Brooklyn, will bring it.

An Interesting Decision.

There are a number of mercantile houses in the United States, whose products, owing to high quality, are always sold at a standard price, and the mere fact that any such products, other than second-hand or shop-worn, should be offered for sale below this price, ought at once to excite suspicion in the mind of the purchaser. An interesting instance of this came to light recently in the suit of F. G. Anthony, of New Haven, Conn., *vs.* The Folmer & Schwing Mfg. Co. of New York, in the Municipal Court of New York City.

The Folmer & Schwing Company are manufacturers of very high grade photographic apparatus, and all their products have a fixed price to the consumer. Some months ago Mr. Anthony negotiated for the purchase of one of their cameras through Henry C. Close, an employee of the defendant company. The negotiations were

carried out in the sales rooms of the company in New York, Close agreeing to make Mr. Anthony a special price for the outfit; the deal being concluded, Mr. Anthony returned home, and when notified that the outfit was ready for delivery, mailed his check for the amount, made out to H. C. Close, the employee of the company, instead of the company. A little later Close fled to Mexico, where he is now imprisoned, pending international extradition proceedings, it coming to light that he had been dishonest in a number of instances.

About this time Mr. Anthony sent his camera to the defendant company for some slight repairs. Upon examination of the serial number on the camera it was found that the instrument had never been sold by the company, and they retained it as their property. The camera not being returned to Mr. Anthony, he brought suit to recover its value. The testimony in the case proved that the defendant company had not sold the camera, and that the title did not pass from them.

The request of Close that the check be made payable to him should have aroused the suspicion of Mr. Anthony, but as it did not, he lost the case.

The decision in this case proves conclusively that one cannot be too careful, when offered special concessions that are not warranted, or are unusual in a regular legitimate transaction.

SOCIETY NEWS.

Secretaries of Societies, or Camera Clubs who want their meetings reported or who have communications of interest to photographers that they wish to have published should send them direct to Dr. John Nicol, Tioga Centre, N. Y.

The Camera Club of New York.

The regular monthly meeting was held at the rooms of the club 5 West 31st Street in this city on Tuesday evening, January 10th. President F. E. Ives after opening the meeting explained the use of the spectroscope in testing the chemical qualities of regular and special orthochromatic dry plates and particularly the advantage of the Rowland grating over prisms, in the examination of the spectra of different

metals and chemicals appearing in the spectrum. With the Rowland grating the lines between the given letters in the spectrum are more numerous and more widely separated than in the prism spectrum, therefore, are more distinct and easily observed. This was due to the great diffraction of light rays in passing between the fine ruled lines on the glass of the grating.

The screen was somewhat expensive for

the average student and worker to possess, hence it was that duplicates or replicas had been made. Mr. Ives after considerable study and experiment had worked out a way of producing a photographic duplicate or replica of the screen which he exhibited and tested before the meeting and compared it with the original. The light from the iron poles of an electric arc lamp loaned by Dr. H. G. Piffard, was passed through the grating and the noticeable green lines of iron became visibly apparent and easily discernable, both

in Washington a short time ago in the President's office building under somewhat hasty circumstances, which proved to be a life like stereo-photograph.

Dr. H. G. Piffard exhibited a nicely made rotating and oscillating electrically operated developing table, on which trays holding plates could be placed, as well as a box or frame with a tight fitting board cover that will fit tightly over a tray and exclude the light. The use was that an exposed plate could be placed in a weak developer in the tray, then the cover clamped

Electric Automatic Rocker—Adapted to 120 Volt Direct or 220 Volt Alternating Current.

when the original and duplicate grating were used. He stated that the duplicate image was made upon a special horny like tough bichromated gelatine film, then this was removed from its glass support, and remounted or floated upon another transparent support, the side next to the original glass being also in contact with this support. In this way there was no change in the character of the grating lines. When finished it was enclosed between two pieces of glass, and was exactly as serviceable as the original expensive grating while the cost was quite moderate.

President Ives also exhibited a new parallax stereogram nearly 8x10 in size which he had taken of President Roose-

velt in Washington a short time ago in the dark room and sat on the electrically oscillating stand located in day light, and undergo prolonged development.

The A negative viewing stand was also exhibited consisting of a box about twenty-four by eighteen inches square and eight inches deep having three or four electric lamps in the bottom equally distributed. The interior was lined with white asbestos. The top is covered with a sheet of opal glass. Negatives or transparencies placed on the glass are illuminated from below and the intensity of light is varied by moving a small switch cutting out or in more or less resistances. The meeting then broke up.

Elmira Camera Club.

The annual meeting of the Elmira Camera Club was held on January 5th, when the following Officers and Board of Directors were duly elected: President, Maxwell Minier; Vice-President, W. H. Arnold; Secretary and Treasurer, Harland T. Stagg. The Board of Directors consists of W. J. Wetmore, C. F. Bromley and H. W. Arnold.

After the elections several interesting papers were read, followed by equally interesting discussions, and the arrangements for the year considered. Refreshments added to the sociability of the members, all declaring that they had spent a delightful evening.

Boston Camera Club.

The Boston Camera Club, at its meeting in January, elected the following Officers and Executive Committee for the year:

President, William R. Cabot; Vice-President, Samuel B. Read; Secretary and Librarian, John H. Thurston; Treasurer, Charles H. Chandler. Executive Committee, Wendell G. Corthell, George A. Ellsworth, G. Francis Topliff, Charles H. Currier, Herman Parker, Ernest H. Washburn.

After the election Mr. Alleyne Trelana, foreign correspondent for the *London Times*, gave an informing talk on Photography in the Tropics, which very much interested the members.

The club has recently very much im-

proved its studio, and in addition secured a large room on the same floor for exhibition purposes, and in which will be held, under its auspices, the exhibition of the "First American Salon" during March.

Metropolitan Camera Club.

The members are requested to make immediate entry of any apparatus or supplies which they wish put up at the annual auction sale which will take place during the month of March on a date to be announced later.

Notice.

The American Federation of Photographic Societies desires to announce the following competition, open to members of all organizations which belong to the Federation or which may join before the closing date, as announced below:

For the best set of not less than six lantern slides, \$100 in gold and the Federation Gold Medal.

To every other competitor whose slides are selected for the 1905 Federation International Set of 100 Slides, a Silver Medal.

To be judged worthy a place in this set will be recognized as the highest honor obtainable by makers of slides.

Points of judging as follows:—Pictorial Quality, 50 per cent.; Technique, 35 per cent.; Interest, 15 per cent.

Competition closes October 1, 1905.

W. H. Moss,

Chairman Lantern Slide Committee.

LETTERS TO THE EDITORS.**Judging at the American Salon.**

Dear Sirs: How long does it take to judge the merits of a picture?

We read that at the New York Salon about 9,000 pictures were submitted. The jury sat three days—probably for eighteen hours all told. They must then have passed on the pictures at the rate of about nine per minute and done it unanimously at that, as there would be no time for disputes. Judging from the reproductions of pictures selected I should say they probably tossed for it and did not waste any

time over that. I wonder what other of your readers think in the matter.

Yours, etc.,

W. DEARDEN.

(Our opinion of the judging at the salon in question will be found on another page, but we may add that there could not have been time in the three sittings even to "toss" for it. As already said, we regret the fiasco, having expected that this particular jury would show that we were right in our contention for a jury of painters, but it has not changed our opinion, and we still hold that even that jury, with proper

time and proper instructions, would have supported our contention. Eds.]

Making a Photographer.

Dear Sirs:

I have a boy that I am in hopes to make a great photographer of, and would like you to say how you like my scheme for educating him.

I take pains to criticise his work fairly and tell him as well as I can all the beauties, defects and mistakes in his work, and if any of his young friends send him any prints I do not hesitate to look them over and tell him as well as I know just where they succeed or fail.

Now, further than this I get all the pictures that I can from the Salons by those that are or want to be leaders and hang them up in the house where he will constantly see them. Of course being a learner he is tempted to ask questions about them, whether I think that this one is good, whether this has had the proper exposure, whether this one is well composed, etc., and I meet all these questions by simply saying that it is by a leader, but he still insists on knowing my opinion and I refuse to more than say that bigger men then I say that it is good. Of course nothing is perfect and all pictures must have points that might be better but I will not tell him so.

Then when he goes away discouraged I read articles in books and magazines that do point out the weak points in these pictures and I carefully gather them up and

put them in the fire for fear that he may read and come to a knowledge of good and evil.

Then I read more books and articles written by people that praise these artists and their work with a fulsome praise that would make Michael Angelo blush to receive, and paste them up beside the pictures where he can't help reading them, and I even go farther than this and pay some one good money to praise up an artist and his works when I say privately that he has not the first rudiments of art or an art education.

I think that in this way I shall make a great artist of my boy. Anyhow I am doing just as the AMERICAN AMATEUR PHOTOGRAPHER is doing.

Now there is just one thing more, I find that he has been talking among his student friends and more than hints that I am all right in the *Kindergarten* classes but that I feel that I am either not UP to the criticism of anything higher or that as boys will say "I dasn't."

Yours respectfully,

WILLIAM H. BLACAR.

[Our boys that once were little have made us many times a grandfather and consequently it so long since we had anything to do with their teaching that we would prefer to hear the opinion of others as to the value of your method. As touching the last paragraph of your letter, however, our opinion is strong; one of his mother's slippers would do. Eds.]

ANSWERS TO CORRESPONDENTS.

Questions for answers, matter for publications, and all communications to the editors should be sent to Dr. John Nicol, Tioga Centre, N. Y.

A Reader:—We quite agree with you in that he is not to be taken seriously, and takes the cake as a union of egotism and cynicism who cannot pay a compliment without a string to it, as seen in the case of the British exhibits at St. Louis; where, in giving Hinton's as the leading name of those pictorialists that had made the exhibition AT, he added "who attended to

the hanging, and carefully hung his own work in the centre."

What Is a Professional?

In Doubt:—We do not print your letter because the question is too silly to waste more space on. Not the dictionary, but the popular meaning given to the word is what we have to deal with; and we have al-

ready said that a professional photographer is one who earns his bread by photography, and that no matter whether or not he, as side lines, does a few other things; and that an amateur is one who earns *his* bread by some other trade or profession and takes to photography as a side line or amusement, and that altogether irrespective of whether he sells or does not sell much or little of the product of his camera. That is the opinion we have all along held and nothing even the big men you quote, or indeed any others, can say will change it. We may add that while you are at perfect liberty to charge only what the material cost, our advice is now and always has been never to sell below the average price of your professional neighbors, and as much above them as you like, and the more you charge the better will your work be liked.

Dun Brown:—We should like to show up the firm if your experience is exactly as represented; but do you think there is just a little meanness in attacking them under their names while hiding yours under a *nomme de plume*? We should not in any case print your letter except under your own signature, and although you say you will "stand behind us" we should want something more, or rather our publishers would; a certified check for say, \$10,000. There is some truth in the saying that "the greater the truth the greater the libel," and one never knows what a jury may do.

Edinol-Hydro Formula.

R. W. Smelly, W. H. Simpson, and A. Beginner:—The formula for the mixture of edinol and hydroquinone recommended by the American agents for the Bayer products is as follows:

Water	5 ounces
Acetonesulphite	75 grains
Sodium sulphite (dried).....	.225 "
Edinol	30 "
Hydroquinone	15 "
Potassium bromide.....	7½ "
Potassium carb. (dried).....	1 ounce

For normal development one part of this to from 4 to 6 parts of water, and for the development of bromide paper one part to from 6 to 8 parts of water.

For various reasons, however, we prefer the sodium carbonate to the potassium and have never found the addition of a bromide necessary. The following we think leaves nothing to be desired, and may be used for all kinds of development or for the production of all kinds of results:

Water	10 ounces
Sodium sulphite (dried).....	2 "
Acetone sulphite	1 "
Edinol	200 grains
Hydroquinone	100 "
Sodium carb. (crystals).....	3 ounces

The articles should be added to the water in the order given, each being dissolved before the other is added; and the stock solution so made will keep for months if well corked. For normal development one part diluted with nine parts of water will be found suitable, although we like to work slow, and more generally use it one to fifteen.

Over exposure, and we like to over expose whenever there is a doubt, to at least twenty times the normal may, as we have often shown, be overcome by additions of acetone sulphite, the greater the over exposure the more of the retarder.

Facts About Lenses.

T. J. Morgan:—We are not acquainted with the lens you name, but the most important feature of a lens for pictorial purposes is its focal length which should not be shorter than once and a half the length of the longest way of the plate on which it is to be used, ten and a half inches for your 7x5. If you bought it already fitted to the camera it is not likely to be so long, and as the camera has a long draw, your better way will probably be to use the back lens of the combination, that is on the presumption that it is a doublet. For a reason not well understood prices of lenses increase with the increase in their focal length, and those who supply cameras already fitted with lenses keep them as far as possible on the short side to keep the cost down. Photographers who take photography seriously should first select a lens suitable for their work and then get a camera to suit it.

Five Dollars Out.

S. W. Brett:—You have lost your five dollars. A *photometer* is an instrument for the measure or estimation of the *luminosity* of light, generally for comparing it with a standard candle, while for the measurement or estimation of the "*actinism*," the chemical or photographic value of any particular source of light an *actinometer* is employed. As the less luminous end of the spectrum, the blue-violet, is the more chemically or photographically active the use of the former for the purpose of the latter would be misleading; although we know that the terms are frequently employed by the thoughtless or ignorant as synonymous.

Combined Bath.

R. W. Moffat:—No, we do not approve of the toning formula. The essentials in a toning and fixing solution, generally called a combined bath, are water, hypo and gold, and every one of the additional five articles in the formula you send is not only useless but some such as the alum and lead, are actually injurious. The following formula is used by hundreds in this and other countries, and so long as it is not used beyond the exhaustion of the gold the prints toned in it will be as permanent as silver prints toned in separate baths.

Water	8 ounces
Hypo	1 "
Gold chloride.....	1 grain

It should not be used till twenty-four hours after being made up, and the prints placed into it direct from the printing frame, that is without washing.

Costly Experience.

S. B. Watson:—Fifty cents *does* seem a good deal to charge for an eight-ounce bottle of developer containing only four grains of edinol per ounce, but you must remember that the chemist is accustomed to charge, not according to the value of the ingredients in a prescription, but for his time as a professional man. You had better pay, and make your own developer in future.

Lens Perspective.

W. C. Marshall:—(1) Your six and a half inch Goerz lens in your F. P. K. 3A

camera will give practically apparently correct perspective in upright pictures, but is too short for those taken in the horizontal position. If, however, you go far enough away to include all you want in three and a quarter by four and a quarter the result will be all right. (2) The back lens with a focal length of over twelve inches will answer admirably for prints up to 7x5. (3) With the lens used in this way, that is, only the back lens, the stops as marked for the doublet will be of only half the relative diameter and require four times the exposure required for the doublet. F-8 for example, becoming f-16, and f-16 becoming f-22.

Accept it as "Art:"

Henry Berger, Jr.:—There should be no question as to whether or not the photograph you mention is a work of art as it was selected by a jury including some of the best known artists in New York, and they ought to know. Personally, we do not like it, but that may be from the same cause that promoted the question; not having the right kind of thing,—culture, training, taste, or whatever it may be, "to bring" to it.

Photo Paste.

O. M. HIXON.—We do not know anything of "the powder used by paper hangers" and so cannot say whether or not it may be used for mounting photographs. Such preparations, however, generally contain alum and therefore are better left alone. The following will make an excellent mountant that will keep indefinitely:

Dextrine	3 ounces
Sugar	½ "
Water	4 "
Acid carbolic.....	50 Minims.

Mix well the first three ingredients and apply heat till thoroughly dissolved, and when cold add the acid, stirring thoroughly.

One drachm of glycerine may with advantage be substituted for the sugar.

The one paper is as good as the other for the purposes for which they are intended, but why the one cost more than the other you can learn only by application to the manufacturers.

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AUTUMN WOODS.

C. W. Taylor.
Jacksonville, Ill.

THE
AMERICAN AMATEUR PHOTOGRAPHER.

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NO 3

Edited by DR. JOHN NICOL and F. C. BEACH.

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"YOU PAYS YOUR PENNY AND YOU TAKES YOUR CHOICE."

BY DR. JOHN NICOL.

It is often said that it is easier to write the sermon than to find the text, and there may be something in it, as we are always glad when we find, as in the following extract from the letter of a correspondent, a peg on which to hang a few observations on a subject of more than passing interest. Our friend, with whom it is a pleasure even to disagree because he does not belong to the button pressers, but to the class who take photography seriously, says, "As I understand you, a picture should represent what the artist intended it to, and that is the supreme test; but I never did like the picture of a deer that a young *artist* here painted with a tail three feet long, although no doubt it did represent her conception of the animal. I prefer Landseer or Rosa Bonheur, and rather think that they spent their entire lives in trying to represent nature as it *is*, not as they *dreamed* it."

Exaggeration aside, our correspondent, like many others, prefers the "record of fact," the representa-

tion of nature as it is, to its representation as the artist sees it, or in a way that will convey to the beholder the effect that it has had on him, or the impression he desires to convey. And he would be a bold man who should say that the one phase of photography is of more importance than the other, or that as much pleasure cannot be derived from the one as from the other. To him who takes photography seriously, whether recorder or pictorialist, success brings pleasure, and although we know the claims that are made between the quart and the pint bottle, each is satisfied to his capacity; and where the heart is in it and the best possible is accomplished, each is deserving of equal credit.

We have before us now two pictures made long ago in illustration of Burns' "Cotter's Saturday Night" and his only dramatic poem, "Tam O'Shanter." The one is what may be called a "straight" photograph of the home at Mt. Oliphant, and nothing else could have so well served the

purpose; while the other inspired by "Kirk-Alloway seemed in a bleeze" required very different treatment. All but the ruined Kirk, and its outer walls were just faintly visible, and even that seemed the result of the brilliant light within, an effect that could not have been reached by straight photography and was more likely a result of more than one printing. But the effect was marvelous and just what the artist desired.

These pictures were made some thirty years ago, so that pictorial photography is not quite so new as some suppose; but there is another on our table, come to "Our Portfolio" this month, and in pretty much the style of the haunted Kirk. It is "The Haunted House" by one of our lady readers, and, reproduced by straight photography with ordinary lighting, would be only an ordinary landscape, although a very attractive picture. As it is, however, by manipulation, whether of the negative or in the printing, or more likely both, the house, the central figure although not in the centre, immediately attracts the attention, partly by the illumination from within and partly because of the low tone of its surroundings, although "low tone" hardly conveys the idea that it does, the effect being of that "witching hour" kind easier felt than explained or described, and which, without the title, unmistakably suggests the effect implied in it.

Far be it from us to undervalue a straight photograph; a transcript from nature in which the values according to the illuminations are true and every detail as sharp as the best modern lenses can make them; or to think lightly either of the hundreds

that make, or the thousands that appreciate them. For topographical and other purposes they are supreme, and they give pleasure to thousands who neither understand or appreciate the more pictorial phase in which the artist, "showing nature through a temperament," aims at conveying to the beholder the impression made on him by the scene. While it is true that each considers his own way the best, he would not, under ordinary conditions, continue in it if he did not so think, he should concede to others the right he claims for himself: the pictorialist recognizing the beauty of the straight but perfect photograph, and the straight photographer, even when pictorialism degenerates to eccentricity, as it sometimes does, admitting to his artist brother an equally free hand.

But simple justice requires that we should distinguish between the amount of credit due to the one and to the other; to the straight and to the artistic photographer. Straight photography, with the apparatus and material now at command, is simply a matter of a little practice by any one of average ability, and all the better if he has learned to "see," to recognize the suitable subject and the point from which it can be most advantageously photographed; while for the production of the photograph that shall also be a work of art or a picture in the true sense of the word, there must be added to all that the straight photographer knows something of what is often said to be "born, not made," or at least acquired after much study; the ability to infuse into his picture something of his own individuality. *Verbum sat sapienti.*

And in conclusion, just a word about our friend's concluding sentence, which he meant to be a settler, but which is one of the strongest arguments on the other side. Thousands of painters have made pictures of animals since and before those of Landseer and Rosa Bonheur, and thousands of photographers have tried their hands on that phase of work, but neither painters nor photographers have reached within measurable distance of those artists in their particular line. Why? Just because they, the two artists named, were not content with merely the representation of nature as it was; but by watching, studying, and waiting; and then, by combining, produced, not the animals as they generally were, but their most characteristic attitudes and

expressions, and in a way that had never before or since been done.

Curiously enough, our home happened to be at Liberton Tower on the Blackford range of hills above Edinburgh while Rosa Bonheur was painting her wonderful picture of the Highland Cattle there, and we know how much time she spent, not in actual painting, but in watching and studying their every movement and apparently their every thought; and the result is known wherever pictures are admired. And wherein do they differ from those that had come before and those that have been painted since? Many both drew and colored as well, but none so imbued their work with their own individuality, making their pictures, not as they were but as they saw them.

THE PHILOSOPHY OF COLOR PRINTING.

BY ROLAND ROOD.

Among the many unusual findings of the jury of painters who acted for, and played such havoc with the First American Salon, was, that not merely could photographers not make gum prints, but also that they understood nothing about color printing. This last criticism on their part seems really unkind, for if the impressionistic school of painters are to be allowed to paint shadows violet and sunlight bright yellow, why should not an equal license be permitted the photographers, why may they not color their landscapes pea green or vermillion if they so fancy? To such an extent did that jury object to colored prints, and so unhesitatingly did they throw

them out, that one of the high officers of the Salon has come to the conclusion that "painters are peculiar, that's all, and you must no more show them a colored print than a bull a red rag, and there's no explaining it."

Now, while admitting the bull and red rag part of the proposition, I deny that "there's no explaining it"; not merely can an artist's antipathy to a *bad* color print be explained, but it can be explained upon a purely scientific basis—the question is not so much one of *taste*, as many think, but one of physics, psychology, and strangely, one of physiology. This sounds formidable but is really very easy.

To begin with the simplest case:— Why should a photograph printed in black, or grey and white, as a platinum print, be all sufficient in inducing in our minds images and recollections of nature, images and recollections which are sometimes as strong as those induced by highly colored oil paintings? Because black being the absence of all color, while white contains and is composed of all colors, the combination of the two allows us to imagine any and every color we may chose, so if a particular design only possess sufficient esthetic interest to appeal to our artistic sensibilities, then will the imagination be brought into activity and involuntarily substitute for the black and white the correct colors of nature, or more truthfully, those colors which it recollects nature to have. Further: individuals who belong to that class which is said to possess "no eye for color" will take more pleasure in black and white than in a colored work simply because having no eye for color, or in other words seeing color incorrectly, they will imagine in the black and white those *wrong* colors which they are in the habit of attributing to nature, and thus will be satisfied; whereas a truthful oil sketch disenchants them as it will not correspond to their misconceived conception of nature.

Whatever is true of black and white is also true of *dull browns*, but not of dull greens, blues or violets, nor indeed of any other subdued color; that is to say, a monochrome in quiet brown does not present to us color problems, and this fact has been recognized and taken advantage of by artists in all ages. Why brown should act upon our color sensorium

in this way is a matter open to dispute and one upon which psychologists and physicists are not agreed; so I advance that theory which seems to me the most plausible and which is at the same time the one founded upon the most common sense basis, namely: that brown is the color which occurs most frequently in nature, it is the one note which is ever constant in what surrounds us; in it's various tones and shades it is the color of dirt, dust and decay, and as almost the whole world is more or less dirty, dusty and decaying, we become so used to it that we no longer look upon it as color, but accept it without noticing, just as we do light and shade. It is also the tone to which all pictures turn in time, but which, realizing it to be an attribute of age and not the intention of the artist, we soon learn to discount and become unconcious of. One might think that if the condition of something being ever present were sufficient to render one oblivious to it's presence, then the blue sky would also be accepted as being colorless, but in truth, the habit of looking heavenwards, even when out of doors, is rare; and also, the sky is so assertively blue in it's character that we must remain ever conscious of the color—the gentle ticking of a clock is easily accepted as silence, but it must be an obtuse organism which fails to hear the roar of the wagons in the street (remember distinguish between browns and only claim that *dull browns* possess the property of impressing us as *non colors*, for the instant they are strengthened beyond a certain degree they begin to act as color.)

The application of the above prin-

ciples is daily seen in photographs printed in carbon or brown gum, and whether the pictures be sunsets or marines or nudes, the brown is equally applicable to all; but when for example dull blue green is used, although it will represent the marines beautifully owing to our association of the sea with blue green, yet the sunsets and nudes will become weird and repulsive, thus proving that blue green, even if much subdued acts as color. In just one particular do dull or gray browns partake of the nature of color: they are what artists call *warm*, and warm colors are more agreeable to look upon than cold ones, and without knowing it we are pleasantly influenced by this warmth and our minds are thrown into a more appreciative attitude. Exactly why warm colors: reds, oranges, yellows and yellow greens, should be more charming to look upon than cold colors: violets, purples, blues and blue greens, is again a question of dispute, physicists attribute it to the fact that cold colors tire the nerves of the retina of the eye more easily, psychologists maintaining that cold colors are more prevalent in nature at those moments when nature makes us unhappy, as rainy wet days, dark nights, etc.; other psychologists claiming that we like red and yellow because their presence betokens health in human beings; but be these theories correct or not, the fact remains that if there ever is a choice between using a cold color or a warm color in printing a photograph, *never* use the cold color, always employ the warm ones if you wish to produce the maximum effect.

But the choice between colors is not frequently allowed us. We are pretty

closely bound by certain laws, and to properly investigate these, let us divide the subject into two parts, first: *monochrome printing*; and second, *color printing*.

Monochrome prints (often wrongly called color prints by photographers) are prints made in any *one color*, only such variations in color existing as are produced by the white paper shining through the differing degrees of thickness of the pigment in the lights and shadows; and the color may be any *except brown*, which, as we have seen, comes under the head of black and white. The object of monochrome printing is twofold: either *to suggest the chief color characteristic* of the subject, or *to suggest an effect of light*.

To give an abstraction of the local color characteristics of a motif is far more difficult than to give an abstraction of an effect of light, for it almost never happens that a motif consists of so few or such particular local colors that one single tone will suffice to correspond to them all; whereas one single tone may easily reproduce the light effect. For example: suppose that we wish to represent the predominating color characteristic of sunlit foliage against a blue sky. Obviously blue cannot be used, because the prevailing note of the trees and earth is either green, or yellowish green where the sun falls; green will not do, as it does not correspond to a blue sky; nor can red be employed, as only in abnormal perception does green appear red; neither will yellow imitate any of the local colors. It happens, however, that the association of yellow with sunlight is so fixed in our minds that, as we all know, we never

see sawdust scattered on a gray sidewalk without instinctively feeling that the sun must be shining; therefore if our photograph be colored yellow, although we will lose the blue sky and the green trees, still, an *effect* of sunlight will be produced. A marine monochrome of a dull, or, better still, moderately strong blue green will instantly bring back to our minds not any *effect* of a gray blue day, but the *local colors* of the marine itself, for blue green happens to be close enough to both sea and sky color to recall the sea and the sky. A moonlight scene, however, in blue or green or yellowish green gum will invariably remind us of the *effect* of moonlight, because these colors are the ones most predominating in moonlight; blue in cold, sombre moonlight; yellowish green in bright soft moonlight. A nude or head in red is very lifelike if there are only left enough almost white areas to relieve the monotony, and in the shape of chalk outlines with a little shading was much used by the old masters, the red suggesting the color of flesh (probably from an association with the color of blood), but the instant the flesh is printed blue or green we no longer think of *local color*, but of some ghastly *effect of light*, for it is impossible to imagine flesh to be blue or green.

It will be seen from the above illustrations that in one case the color of a monochrome will make us believe that we see the local color of the objects; under another circumstance it will represent an effect of light; and under another still will be meaningless pigment.

No one general law can be laid

down that will cover all conditions unless it be that the human mind is only too ready to associate color with anything that at all corresponds to it, whether that be local color or effect. In lieu, however, of general laws there are a series of special laws which can be studied to best profit by analyzing some special cases.

The most important of these is common and everyday sunlight. Now sunlight, to which we are so habituated that we never give it the slightest thought, acts upon the eye in a way very different from either ordinary indoor illumination or a gray day. Scientifically, the eye was never meant to be subjected to the strain of very strong light, for although it is provided with the iris which contracts over the pupil, thus shutting out any excess of light that might be damaging to the retina, just as a camera is supplied with stops which can be used to protect the negative from over-exposure, yet this iris does not properly do its work when severely tested, and in the presence of sunlight always lets far too much enter, one of the consequences being, that certain of the nerves in the retina become unduly stimulated and vibrate in excess. But it so happens that these over-sensitive nerves are the very ones which produce upon our brain the sensation of yellow, the result being that instead of seeing sunlight snow-white, which it actually is, we see it more or less yellow (I am not now referring to late afternoon sunlight, which is really somewhat yellow, but to the ordinary midday light); and this is the reason why any yellow local coloring like sawdust, or tinting the paper upon which a photograph is printed, will

suggest sunlight. The weakness of the eye in the presence of a powerful excitant does not stop here, for whenever the nerves are much excited they speedily become exhausted and begin to act queerly, namely, they will suddenly see exactly the opposite color from what they are really being subjected to, or in other words the phenomenon of *successive contrast* will take place, and that not to the small degree that we ordinarily produce by staring at a color drawing, say of a green face, and then by looking at the ceiling in due time behold a red face, but the phenomenon will be visible to a marked degree, so much so that when we have been looking at yellow green sunlit grass, and then turn to the gray trunk of a tree, it will *instantly* appear to be of a fairly strong violet or purple—violet is the complementary color to yellow green. Some eyes (possibly the more delicately organized ones) are very susceptible to the influence of strong light and consequently to the effect of complementary colors; and it is not at all unlikely that the impressionists are of this class. The violet and purple appearance of shadows due to these complementary, or secondary colors, as they are often called, is generally accentuated by the blue light of the sky falling into them, for the blue of the heavens illuminates everything, a shadow being merely that part on which the sun does not fall; so what between the colors which we are induced to imagine exist in sunlight, and those that are actually there, the conception indelibly written in our subconscious brain, is, that sunlight is yellow in the lights and violet blue in the shadows. Scientific authorities

are not agreed as to the exact qualities of the yellow and the blue, but a general average of the practice of painters says that the yellow is of a pale chrome or cadmium, inclining slightly toward orange, and that the blue is an ultramarine (French artificial), inclining toward violet. So to produce a true color print of sunlight the lights should be orange yellow and the shadows violet blue. However, it must always be borne in mind that an effect is but a gossamer cloak, so to speak, thrown over the actual colors of objects; therefore, the yellow and blue should be much grayed, that is, the main body of the print must be black and white, or brown can be used, and on account of its warmth is really preferable; and over or under this black or brown the yellow blue effect is delicately printed. A color photograph so executed will of course no longer be a monochrome but a true color print.

Some people have great difficulty in seeing the yellow notes in nature as strong as they really are, and it is notorious that almost invariably beginners paint too cold, it only being after many years' practice that they become conscious of the ever present yellow in strong light—although they keenly feel the absence of it in the pictorial representations of others—so that when we hear people say, as we often do, that sunlit snow looks dead white to them, we can only attribute their state of perception to an, as yet, incompletely developed color sense.

Sunsets present interesting problems, and again the same lack of sensitivity to yellow occasionally makes photographers do the most weird things. I can recall a print executed

by one of the most famous photographers in America (he showed me the picture with pride) in which the sky was cold green; and against the sky were silhouetted dark brown trees; and this he explained to me was a sunset. Now the sky never was, nor ever will be, at least on this earth, of a pale cold green in the neighborhood of the sun at the moment of its setting—I admit that on casual or careless inspection it frequently *appears* so, *but it isn't*. (Some of those lovely spring skies which people speak of as pale blue are frequently cold green—which again shows the difficulty of seeing yellow). Further: whatever is silhouetted against a sunset is illuminated by the sky opposite the sun, and this will vary between rose, rose violet, violet and blue, therefore the abstract of the effect of a sunset is light running from yellow green through yellow, orange and red (vermilion), and a shadow running from rose through rose violet, violet, purple and blue. Brown or black may be used as a base and the colors should be printed stronger than in the case of day sunlight, particularly the sky colors.

The tones occurring in moonlight are not those of daylight much darkened as some hold, but are again due to the faulty working of the eye. It appears that when the light admitted to the eye becomes very weak those nerves responding to the influence of yellow cease largely to act, while the violet nerves not merely continue to do their work, but become proportionately more active, the consequence being that the pale white light coming from the moon and falling over a landscape, having had some of its yel-

low constituent subtracted (white, as we know, is the combination of all colors), will appear no longer white, but pale green (in bright moonlight pale yellowish green), while the shadows receiving little if any illumination will assume a violet appearance. Therefore: a *monochrome* moonlight should be printed in black and white or very delicate brown over or under a yellowish green tone, while a *color print*, in which only the maximum effect of moonshine can be obtained, must be green or yellow green in the lights, and of a subdued violet in the shadows.

These same principles hold true to the night, but as the source of illumination at night is either artificial or the blue sky, although the shadows will remain the same as they are in moonlight, or possibly, according to some physicists and painters be a purer blue, the illuminated portions of the landscape will assume to a slight extent the color of the source of illuminations, namely, the orange or yellow lamps in the street, or of the blue overhead. Of course in practice these colors should never be obtrusively strong, they must be combined through the means of several printings with black—hardly brown in such an extreme case as the night.

A gray day has always appeared to me as best interpreted in pure gray, and like in night effects, but very little brown cannot be used, not on account of the color of course, but because of its warmth.

An abstract of an interior effect (portraits and figures coming under this head) is more difficult of attainment than outdoor light because interior light does not disport itself in

such an exaggerated manner; often there is little difference in tone between the light and the shade, and a monochrome is about all that the combination lends itself to; but there is one theme of light, the one so often used by Correggio, Rubens, and more recently by the great French bill poster artist, Cheret, that ought to lend itself easily to colored photography. These artists so arranged matters, or imagined that they were so arranged, that the light entering the window was of a greenish yellow color, and the light furnished by the studio itself of a red hue. This is possible when the sun is falling on green trees close outside, and when there are a number of red or red brown draperies or screens which can be so placed as to illuminate the shad-

ows. The combination, when the colors are not too strong, is striking and very beautiful, and may be enhanced by touches of purer red in the deeper shadows. The greenish yellow can be made of yellow ochre and emeraude green, and that of the shadows of black, burnt umber, light red and crimson lake in varying proportions.

I have purposely not touched upon any form of color printing which attempts to render both local color and effect at the same moment, that is, which tries to imitate painting; first, because the fundamental principles are the same as those in the simpler, although more abstract work I have treated of; and second, because the subject is really painting and can best be studied under that head.

WORDS FROM THE WATCH-TOWER.

BY WATCHMAN.

One does not need to look long for the absurd mistakes arising from the foolish continuing to employ the so-called U S numbers so long ago discarded by the Society that introduced them, instead of the really informative f values every one of which bears on its face its own meaning. The latest occurs in an article by Mr. Hord in *The Photographic Times*, in which he contrasts the so-called "fuzziest of fuzzytypes" with f-128. Of course he means f-45, as nobody ever heard of a stop so small, but it shows how easy it is to go wrong and bring the laugh against him, and few like to be

laughed at, especially when they attempt to teach, as Mr. Hord does in the article in question.

* * *

I have more than once noticed and condemned a method of getting contributions on the cheap plan practiced by some of the British journals, but never thought that the method would be found on this side. I was mistaken, however, as a contemporary lately offered two prizes, one of twenty, the other of ten dollars for what it calls "a literary contest;" adding "*We reserve the right to publish any article submitted.*" The italics are mine, but

the sentence speaks for itself and loudly as a cheap way of getting contributions.

* * *

According to the *New York Tribune*, Mexican photographers have hit upon a way to make their subjects "look pleasant." After peering through the apparatus and emerging from under the black cloth, the photographer says: "By the way, would you like a drink?" "Well, I don't mind," says the man with a pleased smile. "What have you got?" "Beer, whisky and wine," says the photographer, and then, before the man can say which he'll have, the camera does its duty. The "expression" of his photograph is extremely "lifelike."

* * *

The cry is still they come, this time something more wonderful than most that have gone before, nothing less indeed than a pre-Daguerreian photographic process the outcome of which for a whole year has been contracted for by Marshall Field, of Chicago, probably the largest and the wealthiest wholesale and retail merchant in America. Here follows the story that is going the round of the papers, the lay press as usual, and my only commentary is that "If all stories are true this is not a lie."

Lyons, Jan. 27.—Henry Ravelle, a former Lyons boy, who, together with his father, conducted a photograph gallery for a number of years in this village, has been lately making a decided stir in the world of art. Failing eyesight, compelling him to abandon the painting to which he had devoted himself since taking up his residence in the City of Mexico some twenty years ago, led Mr. Ravelle to investi-

gate an old-time and long since disused Belgian process of photography, a process in vogue before the days of daguerreotypes, and one which had become a lost art.

Through his knowledge of chemistry and photography this secret process was discovered and greatly improved upon by Mr. Ravelle, until by its use he was able to produce what to the uninitiated appear to be exquisitely and artistically hand-painted water color pictures. From proprietors of art shops all over the country have come overtures to Mr. Ravelle to part with his knowledge, which he holds exclusively in this country and which he shares with but one other person in the world—a native of Belgium to whom the process has been handed down from father to son in direct line for generations.

Marshall Field has contracted for his Chicago store for the entire output of Mr. Ravelle's camera and brush during the coming year.

* * *

John H. Gear, a well known photographic authority, writing in *The Amateur Photographer*, and of exposure, says "many photographers are still to be met with who hang on to the scattered fragments of a long exploded fallacy, and judge the quality of the light by the image on the focusing screen, forgetting entirely that there are two distinct properties in light between which there is no fixed connection, viz., the optical and chemical luminosity." Now I am one of the few, alas, getting fewer and fewer day by day, who still "hang on to the fragments of a long exploded fallacy," although by no means ignorant of the difference between the lumi-

nosities of the chemical or actinic and visible image, but who claim to be able, in spite of that difference, to judge as if by instinct, what will be sufficiently near to a correct exposure by the appearance of that image. I am not, however, quite sure that this latter statement is quite correct; not sure that the result is arrived at altogether from the appearance of the image on the screen, as not while such an examination is in progress, not in fact till about to remove the cap, or press the bulb (although the latter is employed more often than not, not for so-called shutter, but for time exposures) *is it borne in on me just what the exposure should be.*

This, however, is a result of long experience, so long that in the light of the aid given by the Wynne and the Watkins exposure meters, far be it from me to recommend anyone beginning now to attempt to acquire it. With either of these aids to a correct exposure, and the latitude of the modern plate and film there is no excuse for the under-exposure that is the characteristic of nine-tenths of all the snapping that passes for photography, but which is little better than a wasting of material.

* * *

Scarcely a week passes without my reading in one or other of the British journals dealing with photography, of some little thing that I should like to have, but which the lack of a parcels post between this country and Britain makes it almost impossible to get. How long will the people stand it? The latest is a new mountant, Feculose, made by the Glenfield Starch Works, Paisley, Scotland. We clip

the following account of it from *Photography*, and there is really no reason except the selfishness of interested lobbyists why I should not be able by the sending to that town on which Beaconsfield told the people to keep its eye, the few cents necessary to pay for a pound and its postage, and to get it by return steamer.

Feculose.

In last week's issue will be found a note of Dr. Raymond's lecture before the Glasgow and West of Scotland Photographic Association, in which he called attention to a new mountant known as "Feculose." This, he stated, "has the advantage that it will certainly cause the print to adhere, can be easily applied, and has no deleterious effect." He also stated that he "had tried it eight months ago and found it very useful for P.O.P. prints, as it takes very little of the gloss off, and should therefore prove a great boon to photographers."

Since receiving that report, we have had sent to us from the Glenfield Starch Works, at Paisley, a sample packet of "Feculose," and have had an opportunity of trying its powers as a mountant. Feculose takes the form of white powder, and the instructions state that it should be mixed with four or five times its weight of water, dissolved thoroughly, and boiled for at least ten minutes, if possible in a jacketed pan. If this cannot be done, and it must be made in an open vessel, then it is better to allow it to simmer for ten minutes or a quarter of an hour, rather than bring it up to the boiling point. The paste which is so produced can be used either hot or cold, we are told, and if a little pre-

servative is added, and the paste bottled, will keep any length of time.

We have prepared feculose in the way described, and can speak of the fine adhesive character of the resulting paste. It was quite neutral to our tests, stuck well every print thick or thin with which we tried it, and was extremely smooth and pleasant to use. It seemed an ideal mountant for photographs, and as far as our trials could go, and they were pretty thorough, it seemed to be as its makers claimed for it, "quite beyond criticism." As far as we can learn, feculose at this moment is not actually on the market, but it will be almost directly, and we should imagine will attain a speedy and wide popularity.

* * *

What is a Waste of Time?—W. S. Ritch in *The Photo-Era*, speaking of the convenience of films says "How often have I hunted for a certain glass plate (meaning a negative), looking through the whole batch to find it at the end. Perhaps others may keep their negatives filed and in order, but I have never felt like spending my time in that way." How like too many in the world. For lack of a few minutes to register and put away his negatives he spends ten times as much each time he wants any particular negative, and yet so it goes, and these men complain of what a little thought would altogether avoid.

* * *

The Developing Machine and the Film:—As one of the attractions of the late European trip organized by the Photo-Era Company, a special prize was offered for the best set of prints made during the trip, the number not to be less than twenty-five or

more than 100, and the points of value being artistic merit, technical skill, and suitability for reproduction; three important elements in photography generally. The prize was awarded to F. H. McClure, a number of whose pictures are reproduced in the February *Photo-Era*, and they are not only good but remarkably so; fully exposed, and in every respect equal to nine tenths of even the stand camera work that I come across. And yet, hear it ye doubters, they are all hand camera exposures on kodak films and developed in the developing machine.

* * *

The Professional and Amateur Photographer, in one of its periodical complaints against the first class of its readers for neither going to the conventions to hear the "talks" specially intended to help in "making their condition better," nor reading them after they are printed in the magazines; starts a new proposition as follows:

"These same talks are printed in nearly every magazine published in the country on photography. But this does not make matters any better, for the photographer that can see no advantage to be derived from attending conventions seldom ever subscribes to a magazine, and many of those that do subscribe do not read it after it makes its monthly visit to their studio. They therefore know nothing of the improvements being made in the profession and do not hear or read the suggestions made for the betterment of their condition. Now what is to be done to reach these men? Is the elevation of the profession, through the education of its members, of sufficient interest to warrant the setting aside of a certain sum annually, by the State

and National conventions, for the purpose of supplying printed matter to be sent these backward members of the profession personally? Such a thing would be possible, to a certain extent, for the addresses of a great number of them can be had from some one of the business directory agencies. Many of them could never be reached even in this way, for they are here to-day and there to-morrow. But in the absence of something better, it might be tried."

Yes. The "elevation" of the photographer *would* be worth all the trouble and all the cost, and it *would* be possible to get at most of them although so many are "here to-day and away to-morrow"; but it is probable that the dance would not be worth the candle? If, as the P. & A. P. knows, the great bulk of the professionals do not subscribe to even one magazine, and the few that do, do not read it; is it likely that they will read the talks sent as proposed?

NOTES.

THE MEDAL QUESTION:—We are glad to see that the Council of the Royal Photographic Society of Great Britain has decided that the method of giving medals for supposed superiority in pictorial photography is to be abandoned, and the honor of being accepted by a jury of selection, the honor of being "hung" in fact, will be sufficient to bring all the exhibits that they can find room for.

During the earlier days of photography when technique was all that was regarded medals or other rewards were not in any degree objectionable as about it there was hardly room for difference of opinion, but when art began to be considered, and especially when it was the one thing considered, the medals went, not according to any standard as none such could exist, but according to the whim, caprice or idiosyncrasy of the judges; always pleasing but often both surprising and misleading the recipients, and rarely meeting with general approval. The only reason we have ever heard for the giving of rewards was to insure a

sufficient number of exhibits, but the photographer who sends only in the hope of a prize will rarely be a credit to the show, and as a rule the exhibition will be better without him.

EDINBURGH PHOTOGRAPHIC SOCIETY:—Having something akin to a paternal interest in this, one of the most progressive in the British Isles, we keep our eyes on its doings and as our readers know, tell from time to time of such of them as might be worth emulating by some of the camera clubs on this side. The most recent is the establishment of an "Art Union" in connection with its annual exhibition which opens a few days hence. For this purpose the Society undertakes to purchase from the pictures exhibited at least to the value of \$55, and we presume, as much more as the ticket sale will warrant. Tickets are sixpence, twelve cents, each, and doubtless the members will do their best to insure a large return. For many years, almost since the foundation of the Society, each member has received annually a "presentation

print," generally a carbon or photo-gravure, of a sale value usually quite equal to the annual dues of \$1.25, one of which is before us as we write. It is a 14x12 copy in carbon of Sir Noel Paton's celebrated picture "I Wonder Who Lived in There?" a boy, his own son we believe, looking into a helmet with the rest of the mail suit completing the composition. Its imprint is "Session XVII,—1877-78," but although twenty-eight years old it is bright as on the day that it was developed. A signature in the corner shows that it was produced by Doig McKechnie & Davies, but really the work of Davies himself; poor Davies.

We presume, although there is nothing to show it, that the sum hitherto devoted to the presentation print will now go to increase the art union fund, the members getting tickets in lieu of the print. The drawing will take place while the exhibition is open, and the prize winners will be expected to select their own pictures to the value of the prizes, or with such addition in shape of cash as they may desire to make. It is an excellent idea and one well worth copying on this side, as, say what the cranks on the amateur question may, the hope of selling will always attract, and always should attract exhibitors.

LOOK AFTER THE MOUNTS:—The carbon print alluded to above is an object lesson on mounting. On a sheet of cardboard, white as driven snow, and 24x18, harmonized with the carbon image by a printed tint of a greyish shade of about three quarters of an inch in width, the print, as we recollect it, was all that could be desired, but it is very different now. For about one-half of its twenty-eight

years the picture has been in a portfolio, and during the other more or less exposed to the light of an ordinary room, although rarely in sunlight, and the result is that the at one time beautifully and suitably white has changed to a dirty yellowish-brown that largely detracts from the harmony of the picture as a whole. The paper of which the board had been made was either wood or esparto, or more likely a mixture of both, and so was from the first doomed to fade into the ugliest of the sere and yellow. The moral is this. Dealers who deal in *white* cardboard for mounts should deal only with honest makers who will guarantee that such is made from rags and only rags, and *never, never, never* from anything else.

THE FIRST AMERICAN SALON:—The ways of the managers, or some of them seem past finding out so that we leave our readers to form their ideas of it from the various communications in our and others' columns. The leading spirit in the business, Curtis Bell, writing in *The Photographer*, says that as "only those photographs which give distinct evidence of artistic feeling in subject and execution will be accepted, it was intended that only such entries should be placed before the judges." So that after all that had been said about the jury of painters, the most important part of the judging was intended to be done by others; we wonder whether, had such an arrangement been known beforehand, so many entries would have been made. But the whole business has been so ravelled that even the managers themselves differ very materially as to what was and was not done that, as already said, our readers

must form their own opinions as to the rights and wrongs of it; the only thing that seems very clear is that the judging, even on their own showing, was a fiasco, and as elsewhere said, has not in any sense settled the question of the desirability of painters as judges at photographic exhibitions.

LONG FOCUS LENSES:—Our readers know how long and how strong we have fought the battle of the long focus lens, and although it is almost if not altogether fought and won, we are still glad of anything like authoritative corroboration. We have pleasure therefore, in extracting the following table from an article in *The Photographer* by H. T. Munkham, science lecturer, as "useful in determining the most suitable focal length of a lens for the particular work required of it."

	Inter- riors	Exteriors, Street Scenes, Etc.	Land scapes	Portraits
Quarter-plate	4 in.	6 in.	9 in.	12 in.
5 by 4	5 in.	6½ in.	10 in.	13 in.
Half-plate	6 in.	8 in.	12 in.	18 in.
Whole-plate	8 in.	12 in.	16 in.	24 in.

"TONING BROMIDES BY THE IODINE PROCESS" was the title of a lecture given before the last meeting of the Glasgow and West of Scotland Amateur Photographic Association. The lecturer (Dr. Richmond) mentioned that while it had been brought greatly to the front by Mr. Blake Smith some fifteen months ago, and sometimes called his invention, it has been used in local circles within the lecturer's knowledge for the last fifteen years. Prints to be treated must be free from hypo and then placed in the following solution:—A stock solution of 60 grains pure iodine, 120 grains iodide of potash is dissolved in 4 ozs. of water. Some of this is added to a pint

of water until it is a deep sherry color; the print is placed in this, and in a time it changes, and is kept in the solution until the whites are black and the blacks become white. It is next put in a weak bath of sulphite of soda until the prints look like a piece of clean paper. After being slightly washed, the print is put into a weak solution of sulphide of ammonium, and it changes to a beautiful sepia print. The whole process can be done in a few minutes, and during the course of the demonstration a practical illustration of its simplicity was given by twelve prints being toned by the lecturer, while he carefully explained how it was done.

CARBON PRINTING SIMPLIFIED:—The Rotograph Company of New York have put on the market a carbon tissue having for its support a very thin celluloid film through which the printing is done, thus doing away with double transfer and some of the other objections, that trifling as they were, have largely accounted for the lack of popularity of that best and simplest of all printing methods.

The film is sensitized in a 3 per cent. potassium bichromate bath, rendered alkaline with ammonia for normal work, though of course this may be adjusted to the negative as usual, the time of immersion being one minute. Drying is effected in the usual way, the film being temporarily fastened to cards. When dry, the back of the film must be carefully cleaned, and is then placed in contact with the negative, and the necessary insolation determined by a photometer. In the instructions issued by the makers attention is drawn to the fact that certain colors are more sensitive than

others, and considerably more sensitive than P.O.P.

Development is effected by merely placing the exposed film in a dish of water between 85 and 105 deg. Fahr., no rocking or laving of the surface being necessary; in fact, this would be prejudicial, as likely to injure the delicate half-tones. When completely developed, which it will be in from five to ten minutes, the film is placed in cold water for a few minutes, and then allowed to dry. To mount the print on paper, the paper and film are soaked for a short time in lukewarm water, brought into contact, laid on a sheet of glass, air bubbles pressed out, and then squeegeed and placed under pressure, such as can be obtained between two pieces of glass in a printing frame for half an hour, and then removed and allowed to dry. When perfectly dry the celluloid can be stripped off without the slightest difficulty; the print is then lightly rubbed

with benzine, and may be hardened by alum or formaline. If a matt surface is desired, the print can be squeegeed to ground glass and stripped whilst still moist. Rough paper may be used, but a little modification of the mounting process is essential, and greater pressure must be employed.

Lantern slides, stero and window transparencies, can of course be made by the aid of these films, and a much wider range of colors is opened up for this work, as the stripping film is made in twelve colors.

This new introduction should certainly induce many to adopt the carbon process, and the ease and simplicity of working are very striking. We note also that special stripping films are made for three-color printing.

We consider it one of the greatest improvements of a decade, and may say that the address of the Rotograph Company is 771-773 East 164th Street, New York.

THE LATE PROFESSOR ERNST ABBE.

In the death of the late Professor Ernst Abbe, which occurred at his home in Jena on January 14, the optical world has lost one of its brightest ornaments and philanthropy one of its greatest examples. We have therefore pleasure in extracting the following appreciative notice from *The British Journal of Photography*; adding only that his name will be venerated wherever a microscope or a photographic lens is known and appreciated.

In reviewing the work of Professor Ernst Abbe, whose death it was our

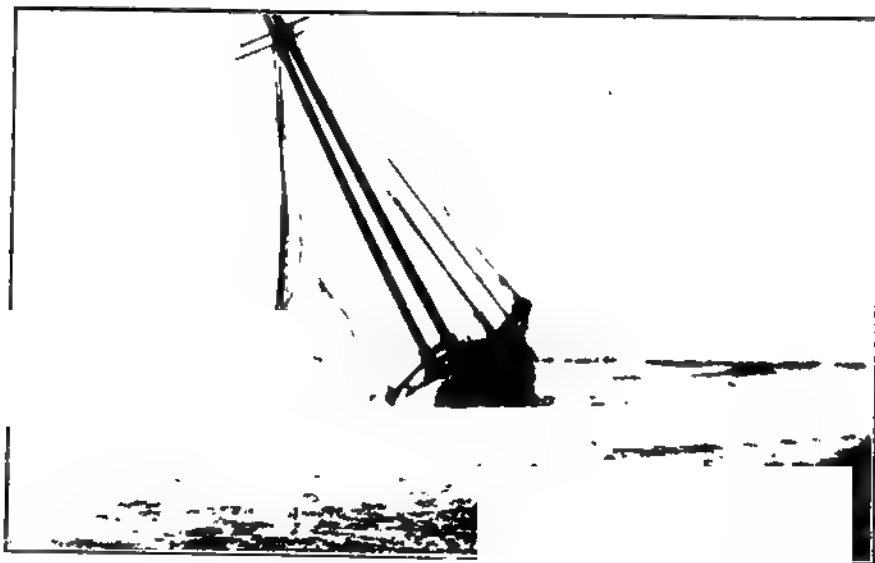
painful duty to record last week, we are conscious of the difficulty of refraining from superlatives in speaking of a man who was first a great scientific investigator and afterwards became even more distinguished for his practical philanthropy. Professor Abbe was born at Eisenach, on January 23, 1840, so that had he lived a few days longer he would have celebrated his sixty-fifth birthday. His student days were spent at Jena and Gottingen, and he afterwards established himself in the former town as

DUNES OF PROVINCETOWN.

John R. Smith.

ALONG THE SHORE.

**John R. Smith.
Provincetown, Mass.**



WRECK OF THE DAWSON CITY

John R. Smith.
Provincetown, Mass.

KING BIRDS.

John M. Schreck.
Buffalo, N. Y.

THE RIVER.

F. M. Braddock
First Salon of the Salon Club of America.

READING THE DEATH NOTICES.

(Bruges.)

Royal Salon (London), 1904.

Wendell G. Corthell.

Wollaston, Mass.

tutor in mathematics, physics, and astronomy. In 1866 he entered into those relations with Carl Zeiss which were to determine the whole course of his career. Twenty years previously Zeiss had founded a small optical workshop in Jena. Microscopes were among his manufactures, and, like other opticians of his day, he designed them by tentative method of trial and error. But he was convinced that he could base his designs on scientific principles and could work by calculation alone instead of by the laborious processes which were then adopted. He found himself unequal to the theoretical part of that task, but in 1866 he associated himself with Professor Abbe, who, in consequence thereof, turned his scientific work in the direction of the microscope. Of Abbe's researches in microscopy it is out of our province to speak at length, revolutionary though it were. Its present interest for us was the fact that it was the beginning of great developments in all branches of optical industry.

It was not long before Professor Abbe found that for certain lens combinations he required entirely new descriptions of glass. "For years," he wrote, "we carried on, in addition to our actual work, investigations of combinations of imaginary and non-existent glasses and discussed the progress which might become possible if the producer of the raw glasses could only be made to take an interest in higher optical problems." A report on the state of microscopic optics drawn up by Professor Abbe on the occasion of the exhibition of 1876 of a loan collection of scientific instruments in London fell into the hands of Dr. Otto Schott, of Witten, in

Westphalia. Dr. Schott was a chemist and established in the glass industry. The force of Professor Abbe's appeal to the glass makers led to his associating himself with the work, and in 1881 he commenced at Witten the preparation of glasses which Professor Abbe and his assistant, Dr. Riedel, at Jena, proceeded to subject to optical examination. This first series of tests were on a small experimental scale, and were made to determine the relationship between the chemical composition of a glass and its optical properties. In two years very promising results had been obtained, and the experimental work was then continued on a large scale with the aid of monetary grants from the Prussian Minister of Education. These researches led, in the autumn of 1884, to the establishment of a glass factory, and the "Glastechnisches Laboratorium Schott und Genossen" is now as famous as the Carl Zeiss Optical Works, the progress of which it has advanced as it has that of optical factories of all descriptions. The Jena glasses have opened new fields, not in photographic lenses only, but in telescopes, microscopes, and other optical instruments. The story of anastigmat lenses which we had occasion to tell when recently interviewing Dr. Rudolph's work is one only of the immense developments which have followed in the train of Professor Abbe's researches.

Apart from his scientific work, Professor Abbe led an uneventful life. He lived within a stone's throw of the Carl Zeiss factory, in a small, old-fashioned house, and his habits were the simplest. Soon after the death of Carl Zeiss he became the sole pro-

prietor of the optical factory, until 1891, when he took a step which gave to the works a character unlike that of any other industrial undertaking. He resigned all his proprietary rights in the optical works and the glass factory. By this act he created the Carl Zeiss "Stiftung," or trust—the translation is not the happiest one, but it is the best English equivalent—and in 1896 its laws were confirmed by the Kultus Department of the Grand Duchy of Saxe-Weimar, and profit sharing was introduced to commemorate the fiftieth anniversary of the founding of the business. The constitution of the "Stiftung," the crown of Professor Abbe's life, provides a complete system of pensions, sick benefits, and profit sharing for all those employed under it. No profits accrue

to individuals. The "Stiftung" devotes the surplus which remains after the payment of the above charges to the endowment of Jena University, and the sums which have been granted for this purpose amount, we believe, to more than £100,000. Professor Abbe's salary as director of the optical works could not be more than ten times the wages of a standard workman, and on his retirement in 1903 he drew the pension provided by the "Stiftung." Thus it is that the world is poorer by the loss of a man who laid the foundations of a great industry, who saw his work multiplied in a hundred ways, and who passed the last years of his life in securing to those who had shared in his labor the rewards of long and patient work.

TONING BROMIDE PRINTS WITH LEAD AND COBALT.

A New Method.

BY A. AND L. LUMIERE AND A. SEYEWETZ.

While investigating the action of solutions containing several metallic salts upon a silver image, we obtained prints of a green color by treating them first with a solution of potassium ferricyanide and lead nitrite, and then with one of cobalt chloride made strongly acid with hydrochloric acid. This second solution is not applied until the print has been washed sufficiently to remove all traces of the liquid first applied to it.

FORMULA AND METHODS.

Here is the composition of the baths we have used:

I.

Water	100 parts
Potassium ferricyanide.	6 "
Lead nitrite.....	4 "

II.

Water	100 parts
Cobalt chloride.....	10 "
Hydrochloric acid.....	30 "

If vigorous green tones are required, we must use prints that have been fully developed. The print is placed in the first solution until it has bleached entirely, and it has then to be washed very thoroughly if we want to

get perfectly pure whites. If the washing has not been sufficient, there will be a discoloration of the whites in the second solution. After the washing, the print is immersed for one or two minutes in the acidified solution of cobalt chloride, and it immediately assumes a very brilliant green color, without any tinting of the whites. It is then washed to remove the excess of the cobalt solution.

THE CHEMISTRY OF THE METHOD.

If we examine the nature of the reactions which are capable of producing these tones, we may suppose them to be, in the first place, the formation of a double ferrocyanide of silver and lead. In the second bath, this double ferrocyanide gives us, with cobalt chloride, chlorides of silver and of

lead, and the cobalt partially substitutes itself for the lead and the silver. We therefore get at the finish an image made up of lead, silver, iron, and cobalt in the form of a ferrocyanide and of the chlorides of silver and lead. If the action is pushed further, we may suppose that the cobalt tends to replace the silver and lead completely.

After giving equation of possible reactions, and results of analyses of the toned images, the authors say that it may be assumed from them that the reactions are partial, the composition of the image on analysis corresponding to an incomplete substitution of the metals; but that their results are not sufficient to allow of the formation of theories about such images with any certainty. *Photography.*

PINHOLE PHOTOGRAPHY.

A paper read before the Troy Camera Club

BY HENRY D. WATSON.

Those camera enthusiasts who imagine the pinhole camera to be something new in the photographic art, will no doubt be surprised, if they will take the trouble to look it up, to find that the pinhole camera instead of being a new thing is really more than three hundred years old.

Of pinhole photography, as we know it at the present day, its inventor knew absolutely nothing. It was his glory to point out the way leaving it to others to develop its wonderful possibilities. Just as the old hand printing presses and hand set types have been laid aside to make room for more modern inventions, so has

the pinhole camera been laid aside, but like those old neglected presses and types, it has not been forgotten and to-day it is admitted and recognized as having some merits which its devotees claim to out rival modern photography.

A GREAT FASCINATION.

We have heard so much of the photographic lens, and have depended so much upon it when making pictures, that there is a great fascination in the idea of being able to make pictures without a lens. Let us see what are the claims made by the enthusiast who practices pinhole photography: First, absolute truthfulness of the

scene depicted. In this respect no image forming device known can compare with the pinhole. In its action the light passing through the little aperture is literally rectigraphic. No known lens, however, composed or corrected, is absolutely rectilinear under all tests and conditions. The pinhole is. Correctly used it renders the lines of objects with geometrical accuracy, exactly as perfect human vision sees them. Another advantage is, focusing the image is not necessary. With a lens this difficulty is constantly asserting itself. For each given distance there is only one point at which the lens will work and only one size of picture that it will give. With the pinhole these limitations disappear.

NO NEED OF FOCUSING.

There is no need of focusing at all except so far as it includes the inclusiveness of the picture and so far as the angle of view is concerned will include a much wider angle than any photographic lens will do. A good wide angle lens will do well if it will take in an angle of 70 or 75 degrees, but with a pinhole it is an easy matter to take in 130 degrees or even more.

EQUALITY OF EFFECT.

Another point of advantage is in the equality of effect which it gives to all parts of the picture. It must be a good lens that will produce a picture quite equal all over. But the pinhole gives us this in all classes. In fact, the pinhole puts out of account all the drawbacks that we associate with lenses—curvature or field, distortion astigmatism, etc. Consequently the definition is just as good at the edge of the plate as it is at the centre.

CHEAPNESS OF THE APPARATUS.

A description of pinhole photography would hardly be complete without a reference to the cheapness of the apparatus used. A well known writer on photography has said, and I think you all will agree with me when I assert he has truly said "that the most costly brass and glass will not guarantee the production of an artistic photograph." So on the other hand, neither will the entire absence of brass and glass shut us out from the obtaining of an artistic photograph. And when we remember the pleasure of amateur photography is not for the wealthy few, but a hobby of the most democratic sort, then the question of cheapness is one of importance. In pinhole photography the expense is almost purely one of plates.

THE PINHOLE CAMERA.

You can make a pinhole picture with your own bellows camera if you wish to experiment, or you can make a special pinhole camera. If you use your bellows camera insert the pinhole in place of the lens board, the making of the pinhole being hereafter described. If you make your own pinhole camera, secure a box that is perfectly light-tight and paint the inside of it black. About three-quarters back from the front of the box on each side insert two grooves which you are to use as your plate holder. No matter where you place these grooves your pictures are bound to be in focus. The closer they are to the pinhole however, the larger will be the subject on the plate. Over the pinhole on the front of the camera arrange a shutter got up after an idea of your own.

THE MOST IMPORTANT WORK.

The most important and critical part of our work is the making of the pinhole. This is so because success in pinhole photography depends upon the perfection and care with which the aperture is made through which the image is produced. While some sort of a picture can be made by simply piercing a piece of tin foil with the point of a pin, securing a good picture by means of the pinhole camera is, altogether another matter. The little aperture must, in its way, be a work of art, and it is almost impossible to take too much care in the making of it.

THE LITTLE APERTURE.

Before proceeding to describe the making of the little aperture let us see what we want and what is essential to have in order to meet with success in our undertaking. First, we want a hole, very small, in its area. So very small that it will permit only the most delicate pencils of rays from each point of the view to pass through it, because if more than the most delicate pencil is provided for, the streams of rays coming from contiguous points in the view and spreading as they go would overlap each other by the time they reach the sensitive plate and make a hazy impression and the resulting picture would lack clearness and definition of detail.

NO RAGGED EDGES PERMISSIBLE.

The hole must also be perfectly round and clean. (Too much attention cannot be paid to this point.) There must be no ragged edges to interfere with the even distribution of rays. If care is not taken in regard

to this, the consequence will at once be seen in the unevenness of the definition and light in the resulting plate.

One more important thing is the thickness of material with which we work. It is important to have a hole, the edges of which are extremely thin. This is a condition quite as necessary to the perfection of the pinhole as any other. This is vital to the perfect working of a pinhole camera for two reasons: To secure elasticity of focus and capability of working at a wide angle, and also to reduce as far as possible the reflection of rays from the interior of the pinhole. If all other things are right and the reflection done away with or neutralized there is no reason why pictorial effects of exquisite beauty cannot be obtained with a pinhole camera, provided you have a pictorial subject.

TO GET A PINHOLE.

Now how do we go to work to get a pinhole complying with the above requirements? The best material to use is a piece of soft copper or brass about one-half inch square, as thin as can be obtained. Lay it on a flat surface and with a punch make a slight indentation on it. Turn it over and you will see on the reverse side a rough edge about the hole. Rub this rough edge on a fine oil stone until it is down level. In the centre of this small circle you will have a spot where the metal can easily be pierced. Now take a small needle and press it gently on the thin metal until the point just comes through, keeping the plate lying flat while you are doing this. You will notice on the reverse side that where the needle has come through there is a burr raised. Cut this off

with a sharp knife and rub it down level once more on the stone. Use a No. 8 or 10 needle to do the piercing as may be desired. Carefully work out the hole a little at a time, rubbing off the burr each time until you have the sized hole required. Look at it under a magnifying glass and if you have done your work skillfully you will find in the plate a perfectly smooth, round hole just the size of the needle selected. To dull the brilliancy of the edge expose the pinhole on either side to the flames of sulphur,

or heat the plate hot and plunge quickly into a solution of nitrate of silver. Attaching this plate to the camera we are now ready to take pictures.

MAKING A PICTURE.

After loading your camera take it to a point where you think it will make a good picture and expose it for about fifty seconds or longer on a bright day as a beginner. Develop as usual, and no doubt, if you have done your work well, you will be astonished at the result.

ON PICTURE-MAKING WITH THE CAMERA.

BY ROLAND ROOD.

It is with a feeling of great disappointment that I turn over the pages of the many photographic magazines. I refer to the prints which are used as illustrations or embellishments and not for the purpose of being subjected to an analytical criticism with the object of having their faults and weaknesses pointed out and explained, but with the distinct object of showing pictures worthy of emulation and having their virtues extolled. Therefore they should certainly have a certain amount of artistic merit. They should, without doubt or question, be finished pictures with pictorial qualities. But many are *not pictures*. They have no pictorial qualities. They have no artistic merits. I cannot even pay them the compliment of saying that they are inartistic; they are not inartistic; they have nothing to do with art; they are merely *inartistic*. And

to be unartistic is to be something which is entirely outside of the realm of art. To be unartistic is not in any sense despicable—to be inartistic is—it is only to be that which, although it may be quite as meritorious as is art, is not art. Good photographs of microscopic organisms or of the moon may be most difficult of production and of the greatest assistance to mankind; but they are certainly not art productions; they are *scientific* productions. A locomotive is a most wonderful and useful product of human ingenuity, but is a result of science and not of art.

Many of the illustrations we see are fifth rate scientific statements of natural facts, and without doubt may interest us at those moments when we are analytically inclined and curious to know how certain things are constructed, or what apparent change

in size perspective produces in objects, or what attitude a man or a woman will assume when standing on one leg or the other. But even the satisfaction of this form of interest will be very limited, for if we should wish to look for principles of values (values are mostly a matter of science) we would be bound to be either disappointed, or, what is worse, much misled, for almost every value in every one of these "pictures" is entirely wrong. Now, my comments may lead you to believe that I am one of those fuzzytype fiends who dislike clear, concise statements of facts. The contrary is true, I hate fuzzytypes except when they represent Nature in her fuzzy moments, namely, the night, extreme distance, mist, etc.; two of my favorite masters in painting, Holbein and Albrecht Durer, focussed more clearly than does even the camera: but I feel no interest in such statements, clear or fuzzy, which do

not take us out of this world into another; or which fail completely to produce in us recollections of things that we have seen.

If art can be classed into the realistic and the idealistic, then the average "picture" comes under neither head; for on the one hand there is nothing in them that makes us feel that we are in the presence of the sea, or on the banks of a river, or indeed out of doors; we merely recognize the clouds to be clouds, and the human figures to be human figures, because they can't be anything else; nor on the other hand are we led into another world, and I therefore deny that they are pictures in the sense that Burne-Jones means when he says: "I mean by a picture, a beautiful, romantic dream of something that never was, never will be, in a light better than any light that ever shone, in a land no one can define or remember."

CONTRIBUTION BOX.

Developing P. O. P.

Several days ago I saw a note in CAMERA AND DARK ROOM of, or relating to, developing P.O.P with Gallic acid. That the main trouble was a restraint to keep the acid in solution. I thought I would try the experiment, so took some Kloro paper and printed until view was fairly well outlined, then developed in following: Water $2\frac{1}{2}$ oz., Gallic acid 125 gr., glycerine 1 dr. The prints take out in two minutes and I think they should be toned rather dark as they fix out quite considerable if left in hypo bath

very long. I used hypo 1-16. I believe that with stronger hypo bath and not leaving print in over 5 minutes or so the result would be best.

The enclosed *film print* was made from a very thin negative, too thin to get good P.O.P. from and gives some idea of color.

Now as to being a stripped film comes from my noticing the bottle of stripping solution, (Formula published in November A. A. P.) the action of which I wrote you about, and it struck me I would see if it would strip film of Kloro paper and the re-

sult shows for itself. Possibly by printing very deep a print could be used in making transparency.

ED. GOODRICH.

[The accompanying print speaks well for the method of development, although as much cannot be said of the stripping, the collodion film having brought with it a portion of the baryta coating, sufficient to prevent its use as a transparency. The color is good and probably could be varied by varying the proportions of the developer, and by brush development the operator could have almost any amount of control. Eds.]

Trimming and Mounting.

THE EDITORS:—

Dear Sirs:—In looking over the January number of the *American Amateur Photographer* to-day I ran across an editorial note asking that readers who think they have any photographic idea that seems to them to be of value contribute the same to your magazine. I use a couple of little labor saving devices in my own work that I have never seen described in my somewhat limited reading on the subject, though they may be hoary with age for all that I know. Anyhow there is no harm in writing to you of them, to use for the benefit of others if they are new, or to contribute to the waste basket if they are not. My feelings will not be injured in the least if this is their fate. Here they are:

In trimming prints made through a rectangular mask so as to leave a white margin I employ an ordinary trimming board and a transparent celluloid triangle. This latter is

placed on the board with one leg against the graduated straight edge and the other along the metal edge where the knife falls, and at such a distance from it as may be desired for a margin. This may be regulated by marks scratched on one leg of the triangle and used as guides in connection with the scale on the straight edge of the board. The print is slipped under the triangle until the margin of the printed portion is just flush with the edge of the triangle toward the knife. When the knife is let fall a perfectly uniform margin is left along that side of the print. The operation is repeated with the remaining three sides and the print has been correctly trimmed at very little expense of time and pains.

The other idea I use in mounting rectangular prints on cards or in albums. I simply fit a T-square over the card or page at the point desired, the T-square being marked with inches and their fractions along its various edges, and held firmly in that place by means of a paper weight. The print, after the adhesive has been applied, is then laid on the card with one edge against the upright of the T-square at such a point on its graduated scale as has been previously determined and rubbed or rolled down in the usual way.

These schemes are so simple that I cannot believe that they are not in general use among amateurs for small prints, but I have never seen them described in photographic magazines, and I have seen much more laborious ones advised as the easiest. Don't bother with them unless they are apt to be new to you readers.

RUSSELL A. MARKS.

SOCIETY NEWS.

Secretaries of Societies, or Camera Clubs who want their meetings reported or who have communications of interest to photographers that they wish to have published should send them direct to Dr. John Nicol, Tioga Centre, N. Y.

CAMERA CLUB OF NEW YORK.—The regular monthly meeting, at which President F. E. Ives presided, was held on Tuesday evening, February 14th, at the club rooms, No. 5 West 31st Street. The only special business was the selection by ballot of a nominating committee to nominate officers and trustees for the year beginning April 11th, next. The Committee of Five nominated was Mr. H. F. Rowley, Mr. L. M. McCormick, Mr. Ed. Heim, Mr. H. T. Leonard, Mr. H. B. Reid.

It was announced that the annual print exhibition will occur in April next.

At the close of the meeting Mr. Burkhardt exhibited an improved panoramic camera and tripod which was called the Cirkut. See notice in "Our Table."

On March 10th the annual auction of members photo goods occurs, and on March 15th, an exhibition of various printing out papers will be begun. The Dagnerreotype exhibit in February proved to be quite interesting, Mr. A. Bogardus spoke entertainingly of his work in dagnerreotype days and Mr. E. Lee Ferguson read a historical paper.

TOLEDO CAMERA CLUB.

Thanks to the President, George William Beatty, we have received a copy of *The Toledo Blade* containing the following account of the rise and progress of the Toledo Camera Club, and as it includes much that should interest other clubs, we gladly reproduce it:

Just entering on the second year of an existence that up to this time has been all that could be desired the Toledo Camera club stands in the front line with the foremost institutions for the promotion of art and artistic study. The Toledo Camera club was organized in the latter part of the year 1903 and has been continually growing. At present an unusual interest is being taken in the work of the club, as shown by the numbers of visitors to the first annual exhibit which has been in progress at the Museum of Art for the past week.

In November, 1903, those interested in the work that had hitherto drawn attention in the Museum of Art, sent out letters from the Museum to all owners of cameras in the city, with a view to interesting them in a Camera club. Response to these letters was quite enthusiastic and within a few weeks an organization was perfected, and fifty-eight members were enrolled.

At the first meeting A. M. Woolson was elected president and served in that capacity for some time, but, in consequence of his leaving town for an extended period, he resigned, and George W. Beatty was selected to succeed him. The officers at present are: George W. Beatty, president; George W. Stevens, vice president; Lewis W. Busse, secretary; Joseph T. Dempsey, treasurer; Miss Mabel L. Pray, Mrs. H. D. Brumbaugh and W. K. Van De Grift, executive committee. The club held regular meetings throughout the year, on the second Tuesday of each month. Each meeting was a competitive exhibition of photographic prints, and every month there were from 50 to 75 entries. All the prints entered in the competition were judged by a jury of three, the jury changing from month to month. This jury was generally composed of one architect, one photographer and one artist. On each photographic print exhibited a printed slip was fastened, and on this slip the judges would write the criticisms, telling how good the picture was and wherein the good lay; or how bad it was, pointing out the defects and telling how it might be improved. Among the judges of the past year were D. L. Stine, Edmund Osthaus, Thomas S. Parkhurst, W. F. Van Leo, George W. Stevens, Marie Osthaus Griffith, C. L. Lewis, Theodore Steadwell, Fred J. Trost and George B. Sperry.

Every photograph shown was given a rating by the judges, and a record of this rating was preserved. Those reaching a certain percentage at the end of the year were competent to enter the grand class, and from the grand class were selected the three prize winners.

For convenience of classification the club adopted ten classes into which the prints were divided. These classes were portraits, landscapes, marines, genre, architecture, interiors, animals, flowers, still life and current events. The members standing first and second in each class were eligible to the grand class at the end of the year. This plan was considered by the members as an excellent one for their first year, as they thereby learned the classification of the pictures, which in photography and painting is identical. In this manner the members of the club learned how to compose pictures; they learned what to select and what to omit. The continued criticism of the judges taught the contestants and other members of the Toledo Camera club, where to place their horizon line, how to distribute masses of light and shade, how to balance the picture, and how to place the most important parts or groups in composition.

The value of this criticism and the exchange of ideas among the members has been invaluable, and the rapid progress of the members was easily discernible in the exhibition just closed.

While the system outlined was considered an excellent one it had its defects, as the percentage of a competitor was increased with the number of prints he entered. This

has been found to be unfair to the members who entered a very small number of good prints. During the coming year a plan will be adopted whereby each picture will stand on its merits and competitors will get full recognition whether they enter few or many. A perfect print will be given 100 points. Any print falling below 75 points will not be eligible to the grand prize or for the annual exhibition. During the coming year the judges will pay no attention to the standing of members on record books, but will make their selections entirely on the merits as exhibited. Notwithstanding the many defects of the system of the past year the prize winners deserve the honors conferred on them by the judges.

During the year the Toledo Camera club has held numerous special meetings, at which they have been addressed on subjects pertaining to their work. On different occasions stereopticon shows have been given, when each member brought several slides of his own making. These were projected on screens and the owners of the pictures told how the exposure was made and under what conditions.

The year has been successful in every way for the Toledo Camera club. It has grown in membership, and the finances are in excellent condition.

OUR TABLE.

Books for review and apparatus and material for examination and report to be sent to Dr. John Nicol, Tioaga Centre, N. Y.

THE PHOTO-SECESSION:—We have to thank the Director for a copy of circular No. 6, half apologizing for its delayed appearance, but for a reason which everyone knows and for which he has the sympathy of, not only every member and associate of the Secession, but of every lover of pictorial photography. And to the Secessionists and those who sympathize with their work it is "a gracious message," telling of nothing but continued success even in the face of attempts to belittle them and their methods. The following paragraph will show better than anything that we can say the position which The Photo-Seceession has attained in the Continental Ex-

hibitions; as does also the fact that the management of the "Elite International," an exhibition by invitation of only one hundred pictures about to be opened in Vienna, has invited the Photo-Seceession to contribute no less than fifty, one half of the whole number.

Wherever the Secession showed—Vienna Photo-Club International Exhibition, Dresden International Art Exhibition, The Hague International Photographic Exhibition—its collections were met with full appreciation. In fact, the most prominent of the Viennese—Messrs. Henneberg and Kuhn, whose names are synonymous with the highest achievements in pictorial pho-

tography—over and over took occasion, both in writing and by word of mouth, to express their sympathy and appreciation of the spirit exemplified by Secession work and principles. Higher appreciation than that of these men we can not ask. So much in sympathy did they find themselves that they were stirred by their enthusiasm to join in founding the International Society of Pictorial Photographers, fuller particulars of which will shortly be made public. We can say no more at present than that the more prominent photographers of Great Britain, France, Germany, Austria, and the United States have founded what virtually amounts to a world's Photo-Secession.

Although, as the Director says, the Secession has neither quarters nor paid officials, the "activities cost coin and effort—we furnish some of the coin, some of the effort, and practically all of the drudgery." All of which means that money will be welcome, whether by donation or an increase of the Associateship, and it is comforting to see that three at least recognize the good work that is being done and do something to help it on; "a Boston Lady" having contributed \$25, "A New York Associate" \$40, and "Anonymous" \$75.

While many if not most of the Secessionists are our readers, there are many of our readers that are not Secessionists, and some of them at least ought to be. We do not, of course, say "Fellows," as that is a position that needs to be wrought for and won; but there are at least many that would be welcomed as Associates, thereby honoring themselves and at the same time helping on the good cause of true pictorial photography. An application to Alfred Stieglitz, 1111 Madison avenue, New York, will bring all needful information; *verbum sat sapienti*.

* * *

THE PHOTO-MINIATURE, No. 66, is devoted to "Practical Methods of Development," and while it can hardly be said to contain anything new it brings many methods together in a way that may be useful in a "which you please my pretty little dear" fashion. Amidst much that is good there

are some things in which we can hardly agree with the author, that in the early eighties, for example, photographic literature was "rare and dry." We happen to have much of it at hand, including both the B. J. and the Photographic News which he specially mentions, and not only do we find it plentiful but quite as interesting as anything either before or since. Nor is his advice to "go back to the beginnings of negative making" to make sure that in developing we are on the right track any better. Developing then was as different as chalk from cheese except that the result then, as now, was the deposition of reduced silver where it was wanted; that silver in the one case being taken from the developing solution itself, and in the other got from the silver haloid imbedded in the film, and those of us who were perfectly acquainted with the former know how little that knowledge helped us to overcome the difficulties of the latter.

Considerable space is given to what he calls the Wallace method of development, a hybrid of the Wynne & Watkins, and the Hurter & Driffeld methods, and in our opinion, not so good as either. If we understand it aright, it depends on a correct exposure for which it does not provide, on temperature which must be ascertained on each occasion, and on a "contrast factor" which must be decided on before development, while the operator must adhere to a special pyro formula or go to the great trouble of making a new table for each reducing agent he may desire to employ. In our opinion, it cannot hold the candle to, say, the Wynne's method which we at present employ, and with which all reducers and all ordinary temperatures are equally available, the one, or rather the only two things needful being to expose a slip of paper to the light and make a slight turn of a disc of glass to learn all that it is necessary to know. But the author makes one useful observation in speaking of the exposure meter. He says "It should always be remembered that these give the shortest possible exposures under given conditions, so that exposures slightly in excess of the figures indicated by the meter used will be advisable." This tallies with what we have so often said, to-wit, that we always add

about twenty-five per cent. to the indicated time, and never find it too much.

We cannot conclude this notice without calling attention to a statement made by Gaston Alves to the author, and recorded on page 359, to the effect that he had "exposed plates 20 times under the normal, and 40 times over—a range of 1 to 800—and produced photographs among which professional photographers could not tell which were over and which under." This may be true of some professionals, as they as a rule, are given to short exposures, but if by "normal" he means correct exposure, and that a negative could be developed on a plate that had got only one-twentieth of that, that would deceive an amateur of a year's experience, then we say that he is mistaken. Over exposure to almost any extent may be amended, but under, to even a small extent, never. Actone sulphite may be made to largely undo the effect of light on the exposed film, but an exposure that has not been sufficient to overcome the inertia of the plate and affect to at least some extent the deepest shadow, cannot be developed into even a passable negative.

In spite of these little faults, however, Photo-Miniature, No. 66, is well worth having, as nowhere that we know is so much of real importance concerning this important subject to be found in so small a space.

* * *

PHOTOGRAMS OF THE YEAR, 1904. New York; Tennant & Ward. Cloth, \$1.50; Paper \$1.—This is the tenth of a series of highly prized volumes that occupy an honored place in the handy shelves of our library; highly prized, because better than anything else, they tell of and show the progress of photography during the past decade, and in the "handy department" because they are so often referred to by ourselves and a never ending source of interest and amusement to our frequent visitors. One of the many advantages of the book, and one in which it differs from most of its kind is its catholicity, knowing neither school nor fad, but selecting from all over the world such illustrations as will best show whatever progress is being made; and its constructive criticism, especially of the pictures in the two great exhibitions of the year, as showing both what to emulate and

what to avoid, makes it one of the best, if not *the* best educational agents for the would-be pictorial photographer.

In this, as in previous volumes, the status of photography in various countries is recorded by various writers, although just why America should have been intrusted to Sadakichi Hartmann is a puzzle to more than one class of our pictorialists; and it is perhaps something to be thankful for that he has mainly confined himself to the "First American Salon." Demachy, as before, leads off with France; H. Mortimer Lamb writes hopefully of the art in British Columbia; and Australia is taken care of by A. J. Hill-Griffiths. H. Snowden Ward continues his advice to would-be Picture Makers, advice well worth following. But, as usual, the most interesting and instructive part is, Carter's criticism of the pictures of the Royal and the Salon; criticism with which, whether the reader agrees or not, cannot fail to be of untold value. And to help him in its study the usual reference index will be found; a feature almost unique but for which the editors are by every student most heartily thanked.

Of the illustrations we shall say nothing except that here will be found every variety from the extreme fuzzy-type to what is almost the "usual thing," but all welcome and each having something to teach that is worth learning; even the, in our opinion, least valuable from a pictorial point of view, the most valuable from a photographic. We allude to the print on page 172, a portrait by Miss Emma Spencer, of Newark, Ohio; which shows abundantly the absurdity of using a lens of too short focus for the size of the image photographed. In this portrait both hands are equally prominent, but the near one, measuring at the wrist, is just fifty per cent. thicker than the other although, in the print, there is not quite the distance of the width of the body between them. We have long preached the gospel of the long focus lens, but never had a better proof of the distortion in the work of those who have not been converted to it.

If the true value of *Photograms of The Year* were properly understood it would be found on the shelves of every photographer and every picture lover wherever either are to be found.

THE PRACTICAL PHOTOGRAPHER.—The American Edition issued by the Photo-Era Company, for January, deals with "Winter Work," a phase of photography, until recently at least, too much neglected but now coming considerably to the front. Henry Speyer is the pictorialist selected for appreciation in this number, and although hardly known on this side, his work, judging from the examples reproduced, in the line of winter work is well worthy of the honor. It is often said that too many cooks spoil the broth, but that certainly does not apply to winter work as treated in this book, the dozen or more writers who are also workers, each having something to say and most of them something to show that is both worth reading and seeing, and which cannot fail to be of lasting benefit to all who have the good fortune to possess it. The Practical Photographer keeps up its character as one of the best exchanges that come to our table.

* * *

ON A VARIETY OF SUBJECTS.—In our review of *The American Annual of Photography*, we noticed a contribution by Henry Wenzel, Jr., American Agent for the Wynne Exposure Meter, with the above title, and are glad to see that he has reproduced it in the shape of a neat folder, telling all that is necessary to know about stop marking, shutter speeds, timing of pinhole and other exposures, etc., etc.; and as a two-cent stamp and a stamped and addressed envelope will bring it from 237c South Fourth Street, Brooklyn, it ought to be in the hands of every one who would use his camera intelligently. It is a *multum in parvo* of just the information that every camera carrier should have, but that not one in a hundred know anything about.

* * *

THE BRITISH JOURNAL PHOTOGRAPHIC ALMANAC.—The growth of this annual visitor which has not once failed to make its appearance amongst our holiday-time books, at first almost fit for the vest pocket, and now a ponderous volume of 1,612 pages, may be taken as typical of the rise and progress of photography. Aside from the first few years of its existence, in which the contents were more or less ephemeral, beginning in 1866, it forms a library in itself

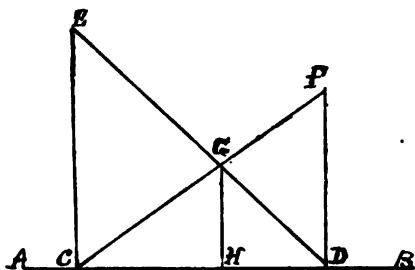
of the greatest possible value. Taking down the first that comes to hand we find it the issue of 1869, and opening it at random come on a most interesting article by Ernest Edwards on "Small cameras for enlargements" in which he advocates a fixed-focus arrangement, with a single lens of three and three-quarters focus and a plate of $5 \times 2\frac{1}{2}$ inches on which two negatives were made. This volume has only a little over 50 pages, and curiously enough is bound in claret colored cloth, as were all the copies that came through our hands to the then subscribers to the journal in Edinburgh, although the editor of this present volume in an article on the history of the almanac says they were and continued to be bound in green.

Instead of the original 32 pages and weighing hardly an ounce, or the 200 of that of 1869, this, as already said, has 1,612, and weighs three pounds. Over 1100 of these pages are devoted to advertisements, not by any means the least important or least useful of the contents; of the remaining pages, 131 are given to formulae, 25 to tables; 61 to recent novelties in apparatus and material; 42 to photographic societies and camera clubs, including British, Colonial, Continental, and American, and 220 to contributed and other articles. These are of the ordinary stamp, hardly as interesting as in the earlier days, probably because we have become, as it were, saturated with the kind of information then greedily ingested; but we are tempted to reproduce a graphic method of ascertaining the combined focus of any given pair of lenses without the calculation which turns so many away from all such mathematical symbolism.

It is by that encyclopedic veteran, Thomas Bolas, who says, "Geometrical methods of calculation have the advantage that great or considerable errors are unlikely to take place, and geometrical methods are especially useful in connection with calculations relating to the focal power of lenses. A frequently occurring problem is to find the combined focal length of two positive lenses in contact, or the focal length of the added lens required to produce any required shortening. In these cases the arithmetical methods are complex but the geometrical methods are easy.

To find the combined focal length of two positive lenses in contact:

On any line $A B$ erect a perpendicular $C E$ equal to the focal length of one of the lenses, and also the line $D F$ equal to the focal length of the other lens. Join $E D$



and $F C$, and at the intersection G draw $G H$ perpendicular to $A B$. Then $G H$ will be the focal length of the combination.

To find the focal length of the supplementary lens for producing a combination of a required focal length.

Let $E C$ be the focal length of the original lens. Erect a perpendicular $H G$ equal to the required focal length, draw $E G D$, and erect a perpendicular at D . Draw $C G F$, and then $F D$ is the focal length of the supplementary required.

Modifications of this method may be made to suit negative lenses and to take account of separation.

The British Journal Almanac has a unique place in the photographic world and instead of the twenty-five thousand copies annually sold, three times that number would hardly satisfy the demand if those to whose interest it caters really understood its value.

* * *

WITH THE CAMERA, the monthly circular from The Illinois College of Photography, tells, as usual, of the numbers of former students who have found, some localities in which to open studios, and others situations as operators, but all doing well and giving satisfaction either to their *clientele* or their employers, the best of all evidence in favor of the thoroughness of the teaching of the College.

It tells, equally, of course, of the marrying and giving in marriage, showing that there can be no better place for a young man who wants the right kind of *helpmate*

when he intends to open a studio, from which to make his selection. Since our last notice the Athletic Association has given another reception followed by a ball; an orchestra of twelve pieces has been formed and made an excellent beginning, and last but not least, arrangements have been completed for the erection of another school building, three stories high and suitably equipped for teaching purposes.

* * *

CAMERA WORK, No. IX., and dated January, 1905, has not been long in following its predecessor, hindered through the absence and illness of its enthusiastic editor, and we almost hesitate to say what we feel, that it is better than those that have gone before.

Camera Work, No. IX., gives us more examples of the work of Clarence H. White, most of which we like better than the previous example; four examples of the work of Eva Watson-Schutz, and one portrait, that of White himself, by Steichen. Of this last we are more than half afraid to speak. It is only a part of a head and a hand, but such a head and hand. Well, it speaks for itself and with no uncertain sound. The very soul of the man seems revealed in the eyes and other features, and even the hand speaks; yes, speaks, and tells in its very grip of its sincerity and determination. But it must be seen to be understood, and may not be understood then, but if so, the fault is not that of the artist nor the model, but it will be because the observer cannot bring to it that which is necessary to its true comprehension.

The literary department is also fully in advance of previous efforts. Roland Rood leads with some useful suggestions anent "Photographic Values," a thing not well understood by photographers generally; and is followed by an appreciative notice of Mrs. Eva Watson-Schutze by Joseph T. Keiley, whose biographic ability is of no ordinary kind. In a good biographer a sense of humor is almost a *sine qua non*, and that he possesses it in a high degree may be seen from the following incident. Speaking of Mrs. Watson-Schutze's sense of humor, he says: "She once wrote me, when an exhibition of mine in Philadelphia

was being made the subject of considerable and picturesque criticism, that she had instructed the custodian of the exhibition-rooms that he must stand up for the show, and that his conservative and safe reply was: 'Oh, yes; I'll help him out, ma'am.' And he did—he packed and expressed the prints later."

F. H. Evans occupies considerable space with a criticism, mainly of the American pictures at the late exhibition of the Linked-Ring in London, pictures, which it will be remembered, were selected by The Photo-Secession here; and which abundantly shows that he does not see eye to eye with some, perhaps with most of the Secessionists; but they are not the kind that take offence at criticism, however opposed to their own notions, so long as it is honest and sincere.

The editor of *Camera Work*, as we have said before, is too big to notice the scurrilous things that have been said of him in connection with his letter intimating that neither he nor the members of the Secession would take part in the "First American Salon in New York," and here he contents himself with giving extracts from some of the New York Dailies, and they are quite enough. Taking it all in all, *Camera Work*, No. IX., well sustains its reputation as a unique leader in everything connected with the highest aims of pictorial photography.

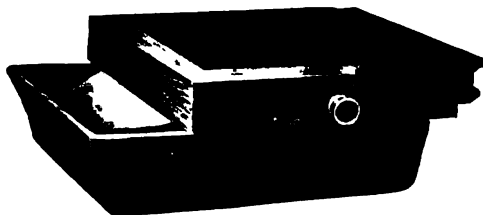
* * *

PHOTOGRAPHY IN COLORS.—Mr. A. C. Fordham, the genial president and treasurer of the firm of Howe & Hall, Chicago, importers and jobbers of photographers' supplies, paid us an interesting visit during the month. They have secured the American rights of the Van Slavick process of multicoated pigment tissue and have a large consignment of the material on the way, which is expected to be ready for the market in the latter part of April. Mr. Fordham is justly enthusiastic on the subject and displayed a number of prints which were certainly very attractive and very promising. While the colors rendered cannot be said to be strictly true to nature, yet in landscapes this is not so noticeable and one particular print of a woodland scene with finely marked beech trees was highly

satisfactory. The paper is similar in appearance to carbon tissue but is coated, we are informed, with nine layers of colors and each color is acted on more or less in proportion to the various densities or tone values of the negative. It is needless to say that a fully timed negative is necessary to obtain anything like satisfactory results and orthochromatic plates will give a better range of tones, consequently more variety of color.

* * *

TIMED DEVELOPMENT is now so justly popular, on account of the greater facility and the more uniform and better quality of negative obtained thereby, that we welcome any new aid in that direction. The Kodak developing machine has long since established its claim to be the only rational method for developing roll film and several attempts have been made to apply the daylight system as successfully to plates. The latest device brought to our attention is the Stage Daylight Plate Developing Tray, and a trial has proven that it is both practical and convenient. The illustration shows the principle. The bottom part is a specially constructed hard rubber tray provided with a movable light trap and lip for pouring on and off the developer. The upper part consists of a special plate holder with double draw slides. The regular plate holder is placed in grooves on the special holder and the slides of both withdrawn; a half turn of the knob on the side and a slight pull releases the spring holding the plate which then drops into the special holder. The slide is again inserted in this and it is placed on the tray and the slide again withdrawn when the plate drops into the tray. The developer is then poured in and the tray rocked for a few seconds, when the other slide is withdrawn and the appearance of the image watched for through the



Stage Daylight Developing Tray.

ruby glass in the holder. It is possible to see quite clearly the first appearance of the high lights and the time of development is judged according to the factor of the developer used. When development is complete the solution is poured off and the plate given several rinses of water without removing the cover. When all the developer is washed from the film the plates can be removed from the tray and placed in the fixing bath in the light of an ordinary room. The construction of the Stage tray is theoretically and practically perfect and it should prove a useful adjunct to the traveller's kit and an incentive to all amateurs to do their own developing, even

50 inches taken at random contain 22 heads. Copies of this, we understand, are to be had for \$2.50 each, and it would pay every photographer in the land to have one neatly framed and hung in his reception room.

We are acquainted with most if not all of the attempts at panoramic cameras that have been made, and they are not by any means few, the best, curiously enough, being by a namesake of the inventor of the "Cirkut"; but neither it nor any of its predecessors or followers "caught on" or became in any sense popular; some because they came before their time and failed because the key-note to their success, a suitable film or something else had not been

Cirkut Camera. Bellows Extended for 34-inch Focus.

if they are not possessed of a dark room. It is made by Geo. J. Stage & Co., Rochester, N. Y.

* * *

THE CIRKUT CAMERA.—From the Rochester Panoramic Camera Co., comes a booklet telling all about their new panoramic camera to which they have given the name of the "Cirkut," which well they may, as apparently it can go all round the circle and be ready to begin again; and an example of the work it can do, a copy from one of the negatives of the members of the Photographers' Association of America present at the late convention in St. Louis, measuring about 50 x 9 inches and including a number of easily recognized men and women that we are afraid to guess it, although our readers may do so from the fact that two of the

invented, and others because based on a faulty principle.

The inventor of the Cirkut, having probably before him the weak points of all the others, has struck out in a different line, and having at his command a perfect film, including even the daylight loading advantage, and with a revolving camera and moving film instead of a revolving lens, has reached a success only hitherto dreamed of; as, "the proof o' the puddin' being the preein' o' it"; the illustration will show.

The camera is very substantially built, having a draw of 24 inches when necessary, and is provided with a unique device for raising and lowering the lens front, based on the lazy tong plan. The lower ends of the diagonal bars are threaded to fit a horizontal threaded right and left hand screw

adjusting rod. When the rod is rotated in one direction the ends of the bars are spread apart which raises the front, when revolved in the opposite direction they approach each other on the screw which lowers the lens frame. No matter what position it is placed the lens frame is always locked. The adjustment is rapid and at the same time is very accurate. The lens is also pivoted and can be placed at an angle when desired, to secure proper alignment on the ground glass as a substitute for the usual swing back.

The ground glass for focussing is divided lengthwise in a hinged frame, so that after the focus has been obtained, covering the whole field on the glass, one-half of the glass is folded back on itself, leaving the clear space free for the lens image to strike the sensitive film in the detachable film box. The film holder contains the spring propelling mechanism, the shutter and rolls for carrying the film. Adjustments are provided for taking varying widths of film rolls. Film as wide as 10 inches may be used. After the focus is secured the ground glass is pushed into the box, folded back, then the film box is attached and the exposure made by pressing the bulb, a second pressure on the bulb stops the rotation of the camera. Pressure on another button makes an incision in the film to mark the dividing line between the pictures. There are other devices to check errors in wrongly exposing the film, etc. The pinion on the film box holder operates in the circular rack on the periphery of the tripod head. Different sized fans, like clock fans, are attached to vary the speed of rotation as may be desired.

The tripod is very substantial, the sliding legs instead of being square are hexagonal which brings the angle opposite the pressure of the set screw and locks the leg very securely, without play, in any position to which it is adjusted. The tripod head is quite large and has on its upper face sitting flush therewith a concentric metal track on which rollers, attached to the bottom of the camera, run. The periphery of the tripod head is marked off in a scale of degrees of the circle, which enables the operator to determine any given degree of a circle it is desired to have the camera rotate,

also to estimate the number of inches of film used in making such rotation.

One advantage of the Cirkut over all of its predecessors is the fact that lenses of various focal lengths may be employed, and with the camera revolving one way and the

PANORAMIC PHOTOGRAPH TAKEN WITH CIRKUT CAMERA
Members of the Photographers' Association of America in front of University Hotel, St. Louis, taken October 8, 1904.
Original photograph is 30 x 9 inches and shows excellent likenesses of about 300 people.

film the other, lengths of film from any desired size up to twelve and a half feet by ten inches and with an angle of 360 degrees, may be exposed. Folded, the camera measures 9 x 12 x 12 inches, and weighs 18 pounds; and its cost ready for work, is, without lens, \$235, and with a rapid rectographic lens of three foci 10 $\frac{1}{8}$, 18, and 24 inches, \$260.

The price may seem large, but think of the many subjects that can only be secured by such a camera, and of the demand for such photographs and the prices that they would bring. There is a fortune ready to be picked up by the right man in the possession of the Cirkut, No. 10.

**Prominent Dealers Entertained by
Rochester Manufacturers.**

About eighty of the leading dealers in photographic supplies throughout the country met in Rochester on February 20, and for four days were royally entertained as the guests of the Bausch & Lomb Optical Company and the Eastman Kodak Com-

pany. After having been shown all over the Bausch & Lomb factory and witnessing demonstrations of lens making, of the use of lenses and the cost and mathematical exactitude necessary in the construction of highly perfected apparatus, the delegation listened to instructive addresses on the construction and peculiarities of lenses by the various lens experts of the firm. Mr. S. Lawrence spoke on "The Nature and Use of Photographic Lenses"; J. Hammele, "The Anastigmat Contrasted with Other Lenses"; W. V. Moore, "Lenses from a Purely Commercial Standpoint"; and Mr. L. B. Elliott spoke on "Advertising—How it Helps the Dealer."

It goes without saying that the average dealer is none too well qualified to answer the questions of would-be purchasers of lenses and the novel though expensive method adopted by Messrs. Bausch & Lomb, to enlighten the dealer and through them the public should be productive of much good.

A pleasant incident of the banquet at the close of the proceedings of the third day was the presentation by the dealers of a

handsome loving cup to Mr. Edward Bausch. Mr. Morris Earle of the firm of Williams. Brown & Earle, made the presentation speech and Mr. Bausch feelingly and appropriately replied. The cup was inscribed "To Mr. Edward Bausch, in commemoration of the event of February 20-23, 1905" and underneath in Latin, the quotation from the 103rd Psalm, "Lo, how good and pleasant it is for brethren to dwell together in unity."

On the fourth day, specially chartered cars conveyed the guests from the Powers Hotel to the works of the Century Camera Company. From there they proceeded to

Kodak Park, arriving about twelve o'clock, when a photograph of the group was taken as they alighted from the cars. They were then shown over the Velox, Solio and film coating plants and entertained to a spread in the dining rooms of the Kodak Park works. It is needless to say that the guests were surprised and impressed upon being each presented with a souvenir of the occasion in the shape of an 8x10 print on double weight velvet Velox of the group that had been taken less than three hours before. An inspection of the factory of the Rochester Optical & Camera Company, terminated a pleasant and instructive trip.

OUR PORTFOLIO.

Prints for criticism; only one at a time and only once each month; to be sent to Dr. John Nicol, Tioga Centre, N. Y. The coupon found in our advertising pages must be attached to the back of each print.

1894. H. W. DURGIN.—"The First Snow." It could hardly have been necessary to send this to the Portfolio, to know where it had gone so thoroughly wrong, as you must have seen that with a sky as white as the snow under it, nothing else could have been right. Nor is that the worst, bad as it is, the blackness of the trees in the very centre of the composition throwing all else out of register. Under exposure and over development have resulted in a picture, pleasing it is true, but utterly false in the values, and unlike anything in nature. It is a fine selection from a fine point of view, and with sufficient exposure it would have been a really fine picture. The exposure should have been for the trees in the centre and development such as to take care of the lights, meaning a solution weak in reducer, and plenty of time.

1895. H. C. HEIDRICH.—"Winter." We really do not know what to say of this. Five inches of a seven inch print taken up with a foreground of not the slightest interest, probably a mass of ice with what may be two breaks or holes, although that is merely guess work; and the remaining

two inches, the lower parts of trees covered with snow. We often say that it is foolish to photograph a scene simply because it is covered with snow, and if ever we said so with reason it is in this case. The photography, however, is good, a good photograph of a subject not worth photographing.

1896. W. H. CRAIG.—"Meditation." The color of this print is much against it, the unpleasant reddish brown just out of the hypo fixing solution, and first impressions are always influential. In spite of that, however, we like the picture. A lady reading at a window, has laid the book on her lap, and is dreamingly looking out, although the expression is not just as we should have liked to see it. It is easier, however, to find the fault than to suggest the remedy, but we feel that she is sitting to be photographed rather than thinking over the passage just read. Nor do we altogether like the position of the hand and elbow; the chair-back seems too high for comfort and the position not one that she would have naturally taken up. Laying these aside, however, we like the portrait and had the plate got a longer exposure should have

hypo. The negative is capable of giving a much finer print, indeed this was so if you had only removed it from the combined bath in time, instead of leaving it till it reached this stage. But for that, however, it is a fairly good average photograph of this very much photographed subject.

1898. T. J. MORGAN.—“A Cloudy Day” is a fairly good photograph of clouds as far as it goes, but as the foreground is simply worthless, instead of placing the horizon line in the middle it should have been much lower so as to have shown more of the clouds. We should clip nearly an inch from the foreground which is merely as if a lot of sticks had been thrust into the ground and without pictorial value of any kind. Had you placed the camera so as almost fill the plates with the sky it would have made a good sky for printing into suitable landscapes.

1899. W. E. MARSHALL.—“Afternoon Wanderers” is a pretty group of four standing and seated amongst what looks like a mass of Virginia Creepers, well exposed and otherwise very good, the only fault being that they are far too high in the plate, badly placed, leaving much more foreground than is consistent with good arrangement. The trimming of nearly an inch from the foreground would be a decided improvement, and then it might with advantage be enlarged to a really fine picture. It is a real pleasure to come across a picture that has been sufficiently exposed.

1900. MARY C. BURGESS.—“The Treat.” The stump of a large tree with, seated at its base, a squirrel eating a nut, is one of these happy accidents or rather one of the few times when such can be caught. But the squirrel, the only part of the print of the slightest interest, occupies only a quarter of an inch of a two and a quarter by three and a quarter print and so needs to be carefully looked for. Cut it down to an inch square and it will be more interesting, the squirrel being practically lost amongst such a mass of simply white paper. What a pity you did not expose long enough to secure a good foreground it would have been a most interesting little picture. Cut down as we suggest, it will be what is so commonly called “cute.”

No. 1896

W. H. Craig

liked it still better. A longer exposure and shorter development would have given truer values, the contrast between the lighted part of the bust and parts in the shade is much too strong, nor is the deep darks of the lower parts of the dress natural. In short, it is a more than fairly good portrait, and would have been really fine had it got just sufficient exposure, say, half as long again, and development proportionally shortened.

1897. N. H. DECKER.—“Passaic Falls,” No. 1. The prints are so much alike, and treatment having been identical, we only notice this. The subject and view point have been so often seen that we suppose it is the only one come-at-able, and this is just about as good as most that we have seen, but we cannot say the same about the print. You have allowed the toning action to go much too far to please the general taste, a slaty-blue, in which the more delicate half-tones have been removed by the

1901 H. H. HARVEY.—"The Deserted Path" has been printed from a much too thin negative, too thin from under development as the exposure seems to have been sufficient, the result being that it is all over an even tone of dark without contrast or even an attempt at light and shade. And it is all the more a pity as the subject and selection are both fine. Intensification might improve the negative by adding to the few traces of lights and so giving the much needed contrast.

1902 MARTHA ROSENTRATER.—"My Father" Your ambition has been greater than your success although the fault is more in your apparatus, or rather your manner of employing it, than in your photographic manipulation. Your lens placed you too near the subject to get this size and being of far too short focus has produced a considerable degree of apparent distortion. One-third of the size would have given you a very different result. A careful examination will show that the near ear is altogether out of proportion to the distant hand, and the right arm is fearfully exaggerated from the same cause. Either be content with smaller sizes or get a lens of at least 12

inches focus, about twice the length of what was employed on this, and you will do excellent work. We make that prophesy without hesitation, because of the ability shown in this, in spite of the shortcomings of your lens.

1903 T. W. MAXWELL.—"The First Glimpse of Sunshine" is a good photograph of a subject that we should have hardly thought worth a plate, although it doubtless looked better in nature than in its representation. A row of tree trunks without anything to distinguish one from another or to give anything in the shape of an objective point; a few cast shadows, but all so wanting in definition as to make their recognition a matter of guessing, the redeeming thing being the light beyond, the light which gives to the picture its title. And that grows on us, the oftener we go to it the better we like it, although it is, as already said, wanting in what usually goes to the making of a picture.

1904 ADOLF OESTERRICH.—"Passaic Falls." There is nothing to say of this from a pictorial point of view, and what we can say from a technical you should know

as well as we, that it has been very much under exposed, the buildings being as black as the paper can be made. Such black buildings in such a prominent position, the first to catch the eye indeed, give the whole thing away and tell that with them so black nothing in the print can be right. Read the article on Our Portfolio in our last and learn to give sufficient exposure, and we shall gladly help you to make pictures, but until you learn that you will only waste material as thousands are doing daily.

1905 A. T. BRANDT.—"The Old Pier" may be locally of interest, but it is neither pictorial nor picturesque, and however old could not be so black as you have painted it. True, it is a difficult subject, the dark wood and the surging water, but a longer exposure, or perhaps more careful development should have lessened the contrast between it and the water. That being said, however, the photograph is good, good far beyond nine-tenths that come to us, and so we feel the more disgusted with the vulgar shaped mat under which you have printed it. Surely you must see that a direct oblong is much more attractive than the irregular form in which it appears. We know they are called "fancy" masks, but they are fancies that no artist should have anything to do with. We do not like retouching as a rule, but in this case it could make a wonderful improvement. Apply the pencil to every stick of the pier, print a little deeper, and the full size and shape of the negative and you will have a pretty little picture.

1906. J. R. HARRIS.—"A Country Road" is a good illustration of "the beauty of simplicity," a few trees on the left, a winding way, hardly more than an indication of trees on the right and nothing else. And yet we like to go to it again and again, each time feeling that it suggests more than before. The only fault we have to find is that the matter on the right is hardly sufficient to properly balance the larger mass on the left, and a slight turn of the camera would have made all the difference. From a technical point of view there is a lack of contrast, a want of the *chiar oscuro* that is so essential to the best work, and of that other essential, atmosphere, the distance being almost as well defined as the immediate foreground; but we like it never-

No. 1907

Mrs D. B. Henderson

theless, and like it better and better every time we go to it

1907 (Mrs.) D. B. HENDERSON—"The Housemaid" We congratulate you on your ambition in tackling portraiture, at once the most difficult and, when satisfactory, the most valuable phase of photography. We congratulate you also on the placing and arrangement of the figure and accessory, and especially on the suitability of your model. But there the congratulation ends, as insufficient exposure has resulted in a practical failure of what, with sufficient exposure, would have been a very decided success. Surely you can see that never housemaid wore so black a dress, and never was shadow on the white apron so wanting in detail or vase in which are the flowers were so black. If you can repeat the operation, everything being just as it was, but giving three times the exposure, you will get a result that will teach you more than if we were to write a dozen pages of instruction

1908. SUSAN G. SCHULTZ.—"The Haunted House" For subject, point of view and trimming, we have nothing but praise and a desire to compliment you on your having learned to "see," to recognise a subject that readily lends itself to the

pictorial. And we are almost inclined to go a step farther and give you credit for purposely introducing what we consider the faults of the picture in the belief that it added to the effects suggested by the title. Nor are we quite sure that the intense blackness of most of the objects do not, to a certain extent at least, carry out the idea and help to induce the gruesome feeling connected with what the title suggests. Whatever was your intention there can be no doubt that it is largely foiled by the attempt to shade down the all too white sky, the darkening in patches is simply destructive to any desired effect, telling so plainly of an unsuccessful attempt to do something that should not have been needed. You have been trying to protect the trees, forgetting that they could not have been blacker than they are, and that the right way was to have shaded the sky all over equally by drawing a sheet of cardboard up and down, never minding the trees. From a technical point of view the negative has been very much under exposed, and the print printed much too deep; although properly printed and the sky toned down equally, but slightly lighter towards the horizon it would be very much improved. We think we see in this sufficient to warrant us in saying that when you learn to give sufficient exposure you will climb very far up the photographic ladder.

1909. S. A. SMALL.—"Randolph Path" is a good subject not very well placed, the path being in the very centre of the composition, and the trees equally placed gives the affair a mechanical feeling far from

satisfactory. Then, the exposure has been so short that in spite of development having been carried to perfect opacity in lights that should have been in various shades, there is not a trace of detail in any of the shadows. Nor is there a trace of the essential atmosphere the distance being as well defined as the extreme foreground. Taken from a point considerably towards the right, given sufficient exposure, probably three times as long as this got, and the removal of the branch that goes from the large to the small tree, and looks as if placed there on purpose by way of an arch, but utterly spoils the composition, you might have a good picture.

1910. E. BROWN.—Of the three unnamed prints we select the one including the Holstein cow as the best, and as a "record of fact" it is almost faultless. In such a print technique is, of course, the only thing to be noticed, and in this it could hardly be improved. A little longer exposure and an equally shorter development would have given truer values, but on the whole it is better than nine-tenths of those that come to the Portfolio. The "record of fact" is an important phase of photography, and in any case the basis of all good pictorial work, and therefore we congratulate you on good technique. Please, however, to attend in future to the instructions at the head of this column as we do not like to throw the surplus prints into the waste basket where all but *the one* must surely go.

1911 CARL KREBS.—"Autumn in the Woods" has doubtless appealed to the pho-

No. 1910

E. Brown

tographer in nature more than it does to us as a photograph, as we cannot see what could have made him consider it really worth photographing. Still there is something in the contrast and the thoughts it suggests, between the hoary stump in the middle distance and the masses of younger branches behind it. Its pictorial quality, however, is considerably destroyed by the scattering of white patches of light all over the print, everything indeed that should not have been higher than half-light being, in the negative, opaque. The cause is over development, which, had it been stopped in time would have given you a very different result. An old stump never bleaches to such a white as you have here, but you might bring the negative back to something like nature by reduction, and it is worth the trial as we like it better the oftener we go to it; it grows on us as all good pictures should do.

1912. DR. F. E. WECKE.—The unnamed print is a fine subject from a well selected view point, but the white sky and almost equally white water tell unmistakably of far too short exposure which the consequent over development has not been able to bring

out sufficient indication of detail in anything in diffused light. But in spite of these faults we like it, and go to it again and again each time feeling something more in it than we had before seen. Still we must insist, if you are to do justice to yourself, on your turning over a new leaf on the question of exposure, always giving sufficient, our liking for this being largely influenced by the thought of what it would have been with the right exposure.

1913. S. A. SMALL.—"Sunset" does not bear out its title, in consequence of the unnatural contrast between the perfectly white sky and water with the equally black of nearly all the rest of the print. If you had stopped development when sky and water were as they should have been there would not have been a trace of light on anything else. And the pity is all the more that the subject is so fine; twice or thrice the exposure would have given you a beautiful picture of which you might have well been proud.

1914. CHAS. SANGER.—"The Little Doctor," two children playing at doctor and patient, the latter being a doll in the lap of

the girl mother, might have been interesting but for the attempt to make it grotesque, and we take photography too seriously to be

who can keep such admiration and such a desire to please.

Nor is this in any sense guess-work, as the photograph does not confine itself to the outward appearance but reveals the inner working of the girl's mind as clearly as a portrait can and always should. Hands, as a rule, are difficult to deal with, but here they have arranged themselves in a way that is satisfactory although they do not make us quite comfortable. We are almost afraid to say so, but they feel just a shade larger than they should be; feel as if the lens had made you go just a little too close to the figure. The fault is almost too slight to notice it, but if your lens is not at least twice the length of the longest way of the plate you may take it for granted that the fault is there; and one that can do such good work should not be handicapped with an unsuitable lens.

No. 1914

Chas. Sanger

interested in such efforts. We may say, however, that if a thing of this kind is to be done it should be done well; that means everything should be technically the best you can make it, and here the exposure has been so short that foreground detail is lost in blackness.

1915. W. H. ARNOLD.—“Watching For Dad”; a girl seated at a window earnestly watching for the coming of her father, is a fine example of “home portraiture,” a phase of photography that has too long been neglected and one especially suited to the amateur. The lighting is somewhat of a puzzle, the hands being so much higher than the face, although both from the same source, nor can we quite understand the position of what seems a tree outside and as if the ground rose in front at an almost impossible angle. With that, however, there is no need to deal, as the portrait itself is sufficiently charming to attract and keep the eye, and the longer we look the better we like it. She is her father's pet, of that there can be no doubt, and knowing that he takes pleasure in seeing her titivated up in style on his return to the home, she has combed and tied up her hair with a ribbon of the color he likes. This we know from the fact that it could not have remained for long in such style, and happy is the father

1916. W. A. PAYNE.—“Nocturnal Solitude” is a very impressive example of “night work.” of which, regarding the conditions

No. 1915

W. H. Arnold.

under which it was produced, we should be glad of more information. The style of the buildings so far as we are permitted to

No. 1916

W. A. Payne

judge, indicate the street of a great city and the suggested contrast between its state now, not a living soul or even a flicker of the brilliant light, and that of a few hours since or hence, is almost appalling. It is a picture in the truest sense of the word and one that is not easily forgotten; one of those that when seen in an exhibition takes

possession of the student and remains with him forever. It is so good, so nearly perfect that we hardly like to make a suggestion, but we feel that a slightly stronger indication of the building on the left, and especially of the window on the darker side of the great building would have been an improvement.

LETTERS TO THE EDITORS.

Stop Markings.

EDITOR AMERICAN AMATEUR PHOTOGRAPHER:

In your comments upon my January article, you say: "The figures of the Uniform System mean nothing, unless their relation to the f values have been learned."

I submit, that a conclusive rejoinder is furnished to this, when it is pointed out, that had the Uniform System been used before the f system had been thought of, it would have been perfectly intelligible. It could have taken any fraction of the focus, such as $\frac{1}{4}$, for its No. 1, and halved the areas of the succeeding stops. The simple fact is, the focus, the Uniform System, and the f system, are all tied together, and the Uniform System is no more tied to the f system, than is the f system tied to it. The Uniform System could have taken any fractional length, say, $\frac{1}{3}$, of the focus, for its base, but it wisely took a fraction represented in the f system, so that the two systems might be easily convertible. This I think, effectually disposes of the idea, that the later system is dependent upon the prior one—that it "means nothing, unless its relations to the f values have been learned."

The Editor says further: "while, say, $f/8$, tells of a particular intensity."

The meaning here is not quite clear to me, but it would seem to imply, that a, "say, $f/8$," aperture, offers some *a priori* means of determining the light effect ("intensity") upon a sensitive plate, which an U. S. aperture, say No. 4, would not determine. If this is the inference, then the reply is, that as a matter of fact, no stop of any system, can determine by any *a priori* method, a datum for light effects. The f system must "appeal to nature" for its datum. It must get it from experimentation, and thus obtain, what the physicists term, the "co-efficient from experiment." But it is plain, that in this respect, both systems are in the same boat, and surely, it is as easy to experiment with an aperture in the one as with the other. It is true, that while in any system we must experiment for data, yet

when one stop is experimented upon, the remaining stops of that system may be gotten by computation; and this brings us to the very gist of our contention: viz., *which system offers the easiest means of making these computations?*

In the f system, the computation is involved. The values of the stops vary as the quotations arising from the division of the second powers or squares of the denominators of the f fractions. While in the Uniform System, by a simple mental process, we divide the numbers.

Let us exemplify: Using $f/8$ as a basis, we want the ratio of say $f/22.6$. Now we must square the 8, getting 64, and square the 22.6, getting 512. We then divide the 512 by the 64, and get as the answer 8.

In the Uniform System, the stops would have been No. 4 and No. 32, and we would immediately, without mental effort, get our 8.

In the presence of such a common example in practice as the above, how can the Editor say: "each succeeding stop being just half or double that of its predecessor, tells without any learning or memorising, all that the photographer needs to know about his stops"? Does he not need to know how much more time must be given to stop $f/22.6$ than to stop $f/8$? In the f system, as has been shown, the process is involved, while in the Uniform System, it is without effort.

The Editor tells us, that the f system is largely the prevailing one, and that the other system is in decadence. I am quite sure that he overestimates this, if indeed he is not directly mistaken. Certainly Bausch and Lomb are by far, the most extensive makers of lenses in the United States, and they use the Uniform System almost exclusively.

Also, the people of the celebrated Goerz lens use it in this country, and I notice in the last issue of the Editor's Own Magazine, that the Wynne Exposure Meter people advertise, that they are "now" prepared to furnish their dials in U. S. markings. However, popularity does not determine mathe-

matical questions. A proposition in geometry is none the less true, whether the majority accept it or not. The subject we have been considering, is one of numerals, and its only authority, lies in itself.

If the users of lenses do not insist upon the U. S. stop markings, it can only be because they do not clearly realize their great simplicity.

Those seeking further information on this subject, should refer to the January number of this Magazine.

Respectfully,

GASTON M. ALVES.

"Convince a man against his will,
He's of the same opinion still."

[It is not likely that anything further that we could say would alter the opinion of our correspondent; but where prejudice has not taken such a hold the fact that the Society that gave birth to the uniform system, after an experience long enough to discover its shortcomings, discarded it in favor of the f system, pure and simple; that Bausch & Lomb, the only lens makers who still continue to so mark them, in their most recently introduced lenses mark *them* on the f system, giving as their reason for so doing that it "represents the absolute photographic value of a lens"; and that amongst British photographers; who are at least as photographically intelligent as their American brethren, the U. S. method is now never heard of nor has it been mentioned in any of the British magazines for a number of years, should carry weight. The question, as our correspondent says, is "one of numerals and its only authority lies in itself" but the fact that a whole Nation tried one of the methods for nine years and then went back to the other and older one means much.—EDITOR.]

Criticising the Critic.

Gentlemen:—

When I subscribed to the AMERICAN AMATEUR PHOTOGRAPHER it was with the understanding that it was a magazine from which I could derive some help in the way of bettering my photography by means of your portfolio. I cannot begin to express

my surprise and I might say disgust at the criticism in the January number of my subject No. 1865.

I realize that the picture could stand improvement, but it does not deserve such butchery nor its maker such mean sarcasm as your critic seems disposed to bestow. The subject is unusually true to nature, and outside of a little longer development, the criticisms are nothing short of absurd.

I have been complimented on several occasions by some of our leading photographers and photo critics on this picture and it was also accepted by the International Photographic Exchange and entered in the special state album.

Were I a Strauss or an Eckstein my work might be deserving of such criticism. But the critic should remember that his dealing with amateurs, and such cutting, severe criticism would discourage rather than spur on the beginner or man of sensitive make-up. The amateur needs and wants to have his work criticised, but in a fair manner, and in the portfolio is where this should be done. I have watched the criticisms very closely for several months, and I have never yet read one that was of a helpful nature, but on the contrary they have been of a most disheartening nature.

If this is all the good this department can do me and my fellow amateurs, I feel that I had better not renew my subscription when due, but rather look for help elsewhere. The portfolio is an excellent thing if properly conducted, but I would suggest that your critic make his criticisms more beneficial and not of such a roasting nature.

Respectfully,

CHAS. R. LUDLOW.

[As a rule, we do not care to defend our criticisms or take notice of the expressions of disappointment that occasionally come. We say "expression of disappointment" advisedly, as such communications, almost without exception, show clearly enough that the prints to which they refer were sent, not for criticism, but in expectation of praise. Nor is this an exception to the rule, as is abundantly evident by the paragraph which we have taken the liberty of underlining, and we are especially glad of the implied permission to print it because the print to which it refers is to be found

in our January number so that our readers can judge as to how far the trunk of a tree as white as paper can be made, and the trees behind it equally black are "true to nature"; or whether a head, so far as is in evidence, decapitated and placed in the fork of the tree, is consistent with serious pictorial photography.

It is not blame, however, but sympathy we have for our correspondent. The blame lies on the "leading photographers and photographic critics" he mentions, if they really were what he represents, it was cruel to so mislead one who, as his letter shows, is alike ignorant of both the technique and art of photography. Such *friendly* criticism has done and is doing a vast lot of mischief. and next to, or perhaps even more than the minor competitions that we have so often cautioned our readers against, tend to throw the young would-be pictorialist back on his oars and leave him lying there for long. Not always in most cases, however, as we have good cause to know. By and by their eyes get opened, and there are now many who at first thought much as our correspondent now thinks, that in time learned to see the advantage of the surgeon's knife, and are now welcome guests at the most conservative of our modern Salons. Our only advice to our correspondent is that he should carefully read the article in our February number by Dr. Nicol on the Portfolio.—EDITOR.]

The Photo Secession and the First American Salon.

Dear Sirs:—

The attitude of the "Photo-Secession" toward the First American Salon at New York has excited much adverse criticism and it is to be presumed that the subject is of sufficient interest to warrant setting forth some of the reasons why the "Photo-Secession" took the stand it did and the ultimate justification of its course.

I feel that I can accomplish two ends in addressing this letter to the photographic press of America and Great Britain: the first in advising photographers of the deception that has been practiced against them and the second in giving the photographic magazines an opportunity to prove their repeated assurances that they stand only for

that which is fair and honorable, and I can only feel that those publications refusing to give space to this letter stand convicted of a selfish interest and sacrifice all right to contend that they stand for the advancement of photography.

You will remember that Mr. Alfred Stieglitz, Director of the "Photo-Secession," issued a letter to the press, appearing in the August number of most of the American magazines, in which he announced that the Salon of New York, "will be of such a type or character that neither I nor the 'Photo-Secession' can have any connection with it or be represented therein." As a result of this announcement there came a storm of denunciation that included everything from the "Photo-Secession" and Mr. Stieglitz to the grammar and diction of the letter and the supposed prophetic inclinations of its writer.

The fact that the management of the First American Salon at New York had, from the first associated itself with influences opposed to the "Photo-Secession," such opposition being due to circumstances that have no bearing on the point in question: that while every photographic interest but one, in this country and Europe was being propitiated by the Committee, every opportunity to sneer at and privately and publicly condemn the "Photo-Secession," was taken advantage of, would surely have justified the "Photo-Secession" in deciding to have nothing to do with the Salon and in even publicly announcing the decision with considerably more force than was done, yet these were not the reasons why it was decided to hold aloof from the exhibition.

It had come to our knowledge and in such a decided way that it could not be gainsaid, that the management of the Salon was not pursuing a course calculated to guarantee that fairness and freedom from prejudice necessary to the holding of an exhibition of photographs that would be of any value to the advancement of pictorial photography. We learned that the Europeans had been told their exhibits would be "*hors concours*," in spite of the assurance that all prints must pass the jury, an assurance vaunted with an insistence that was from the very first an insinuation against the "Photo-Secession." It was felt that there

was a lack of sincerity, a lack of purpose and a lack of ability that boded ill for photography, and as the "Photo-Secession" stands, not for the "Photo-Secession," not for Stieglitz, not for its Fellows, nor yet for its Associates, but for PHOTOGRAPHY, the decision was against the Salon.

When we learned that the letters Mr. Hartmann sent to the Europeans inviting them to send exhibits "*hors concours*" were written and mailed under the direction of the Metropolitan Camera Club, Mr. Hartmann simply signing the letters at the Club in the presence of Mr. Roland Rood, when Mr. Curtis Bell, President of the Salon, told Mr. Rood, who was representing the American Amateur Photographer, that he and another would select certain prints to be submitted to the Jury, when we saw the catalogue and noted the suspicious abundance of names previously known through minor exhibitions and competitions and when we saw the Salon itself, we were justified in the stand we took.

But not so the photographers at large and the general public. Mr. Bell repudiated Hartmann and his letters. Mr. Bell wrote to Mr. Rood that the plan he had mentioned had been changed and all prints would go before the jury. The minor photographers were lauded by the critics as the true pictorialists and the Salon was hailed as the exemplification of photographic art, the raising of photography from the slough of

despond, the dawning of a new era! And the photographers at large and the public believed!

Now Mr. Frederick W. Kost, A. N. A., a member of the Jury who was of the few that served and who got the Jury together for the Salon says that he informed Mr. Curtis Bell, President of the First American Salon at New York, that it would be impossible for the Jury to look over so many pictures and Mr. Bell selected the number the Jury passed upon, which did not exceed eighteen hundred (1800) prints! Think of it! Seven thousand two hundred prints passed upon by Curtis Bell and eighteen hundred by the Jury of Artists! Yet I have before me a letter written by Mr. Curtis Bell on stationery of the Lotos Club under date of November 24th, in which he says: "Every frame entered was submitted to the Jury," and he underscores the word "every"!

Does the "Photo-Secession" need any further justification of its attitude? No! Not even the further statement of Mr. F. W. Kost, member of the Jury, that the Jury did not consider any of the photographs "works of art" and that they all were surprised to find so much ignorance of all art principles so generally displayed.

I will refrain from comment on the position of the management of the Salon.

Yours truly,
HARRY C. RUBINCAM.

ANSWERS TO CORRESPONDENTS.

Questions for answers, matter for publications, and all communications to the editors should be sent to Dr. John Nicol, Tioga Centre, N. Y.

ED. GOODRICH.—The advertisement, in the light of the printed matter the result of your application, is certainly misleading, but a careful consideration of the same fails to recognise anything like a swindle, however near to that it may approach. The applicant, if we understand the matter aright, is told what he must do, both as to his outlay and his influence over his acquaintances before he invests his cash; and therefore, as you say, the man with brains enough to make even the quoted \$5 per week on the system proposed by the advertising firm,

would be able to put himself on a par with a Morgan or a Rockefeller in a very short time. The fact however, that the firm referred to gives a certain kind of information, sufficient to keep most people on their guard before requiring money to be sent, keeps them out of the meshes of the law, and even out of the magazine publicity that we should much like to give. The fact, however meaningless and however difficult to get them to keep it, that they promise to refund the money. "If you do not deem the slides and information worth the price"

will go far to protect them and makes it dangerous to the publisher who would publish just what we should like to say anent the matter. The vaunted "secrets" are utterly valueless, although the use of black velvet as a preventative of halation has been proposed hundreds of times but only, of course, by those altogether ignorant of the principle involved.

Reducing Over-Intensified Negative.

N. H. DECKER.—(1) Prolonged immersion in a 1 to 4 solution of hypo may sufficiently reduce your over intensified negative, or failing that, try the iodine and cyanide, No. 3, on page 65 of *Figures, Facts and Formulae*. (2) Where there is not much to do you cannot have anything better than the Agfa Intensifier, one part to nine of water, but if you have much to do and wish to make it yourself, Lumiere's formula, No. 7 on page 64 of the aforesaid book should answer your purpose admirably; or if you have difficulty in getting the mercuric iodide you may take No. 6 on the previous page, but we prefer the simpler formula of Lumiere. (3) The combined toning and fixing bath referred to may be used over and over as long as the gold remains unexhausted, but care should be exercised not to use it after that, as although the solution continues to give fine tones they are not likely to be so permanent as when they are the result of the deposition of gold. (4) The formula for the "iron solution" on page 105 of the already mentioned book is quite correct but you have not read it aright. The 2,000 c.c. of water, the result of adding the alum solution to the solution of ammonia, is decanted or filtered away and the precipitate drained; and it is to that precipitate that the oxalic acid is to be added and the mixture gently warmed and well stirred, and water added sufficient to make 500 c.c. Iron ammonium alum is a chemical compound, generally called "iron alum," and is in crystals of a fine pink shade, not likely to be found in the stock houses but at the chemists or drug stores. To "Label 20 per cent. Ferric oxalate and 1 per cent. to 2 per cent. oxalic acid" means that each ounce of the solution so made contains practically 120 grains of the one and a trace of the other in each

ounce of the solution. (5) It is possible, as the writer mentioned says, to locally intensify with mercuric bichloride and blackening, but not nearly so satisfactorily as by either of the intensifiers recommended, especially the formula of Lumiere. We agree with you in your estimate of the gentleman you name, there is a "bee in his bonnet," and he wants popularity at any price. Thanks for your good opinion of our work.

Substituting Backgrounds.

S. F. CLOWNAY.—For the substitution of one background for another, as suggested to No. 1863 of "Our Portfolio" on page 36 of our January number, there are several ways. One of the simplest, where only one print is required, is to make a print from the negative as it is on a thin printing out paper, it need not be printed deeper than to show the outline clearly. Cut out the figure carefully, and let the pieces blacken in the light. Using these pieces as masks, print the figure from the negative covering all but it with the cut out mask, thus getting the figure on a perfectly white ground. Next select a negative suitable for the background, out or indoors will do in this case equally well, only taking care that the objects are in a proportion suitable to the figure, and, covering the already printed figure with itself as a mask, print the background, on the previously protected surroundings. Any slight spotting from not having got perfect register can easily be touched out in the finished print.

Where more than one print is desired it is better to make a new negative by double printing. The easiest way is first to paint all round the figure with some opaque paint, gamboge does well, and when dry make a print of the figure, this time deep enough to be right when toned and fixed. Cover the printed but untuned and unfixed figure, with the same gamboge, thick enough to protect it from further light and then print in the background as before. Next immerse the print in water and remove the gamboge, helping the removal with a tuft of cotton; and tone and fix in the ordinary way. Touch up the print wherever necessary, and then make a negative by copying it in the camera.

In the event of your not having a camera with a draw long enough make a copy the desired size, you may, with care, use an ordinary plate for the positive and make the negative by contact printing, employing the masks as in the first suggestion. Greater care, however, is necessary with the plate than the paper, and in the dim light of the dark-room it is not easy to secure correct register without the fingers coming in contact with the plate, although after a little practice it will be found quite easy. Both positive and negative may be touched up where necessary or where an improvement can be made, and in the resulting print there need not be any visible indication of the substitution; while an otherwise worthless print has been converted into a charming picture.

Printing In Clouds in Carbon.

H. BERGER, JR.—We have never found a difficulty in printing in clouds on prints in carbon while employing the following method. Premising that all our printing frames are fitted with glass, we place the negative in the frame and by transmitted light slightly outline the horizon on the glass of the frame with french chalk (talcum) wiping off all but just enough to be seen and too little to appear in the print. This is our only preparation and quite a sufficient guide. While printing the frame is laid flat and the sky covered with a black cloth soft enough to be easily pushed out and in so as to, as far as possible, follow the line, and a little lower than if it were a closely applied mask. To still further soften the outline the cloth is moved from time to time a little up and down, every five minutes, say, during a twenty minutes printing. When the landscape part of the negative has been printed the negative is replaced by that containing the clouds and the cloth applied in the same way, but this time over the landscape, and for the best results the time for the clouds should have been as accurately ascertained as that of the landscape, as on the equally correct time of printing of the two negatives depends the success of the operation. It is really simpler than it looks, and after a little practice you will never think of making masks even when using printing out paper.

Window Transparencies.

E. A. CLARK.—Transparencies on glass are not often made by transference but by printing from the negative, just as a print on paper is printed; they are, in fact, just lantern slides of a larger size. They may be made on an ordinary plate, the slower the better, but easier and with a better result on special transparency plates made on purpose, and coated with emulsion similar to that with which slide plates are coated. Printing is most conveniently done by artificial light as more under control, and exposure is the most important part of the operation, as it must be as near as possible just the correct thing. In transparency making there can be no doctoring of the developer, it must remain a fixed quantity and the exposure made to suit it. Having fixed on the developer, you should expose a plate in sections, beginning with, say, 10 seconds and increasing by tens up to as many sections as you can make on the plate; it being at a fixed distance from the light, say twenty inches. Development will then show which exposure was correct, and thus by the expenditure of a single plate you may get a fair idea of the exposure. Any clean developer will do, but the following is as good as any:

Ortol or Edinol.....	20 grs.
Sodium sulphite.....	100 "
Sodium carbonate.....	100 "
Potassium bromide.....	5 "
Water	10 ozs.

One part of this to be added to seven parts of water. The correct exposure having been attained the only difficulty is to know just when to stop development which must be continued till the lights are properly graded, none being quite clear glass but the very highest, and stopped before any of the shadows are quite opaque except the very deepest of the deep; and nothing but experience will help you do this.

This is all we have space for here although there are many hints that would be helpful to be found in any of the handbooks on the making of lantern slides, one of the best being "Lantern Slides and Slide Making" by Osborne I. Yellott, to be got from our publishers.

DOROTHY AND RUTH

Homar W. Gilbert

THE
AMERICAN AMATEUR PHOTOGRAPHER.

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A JACK OF ALL TRADES AND A MASTER OF NONE.

THIS old adage, founded on the knowledge that life is too short for any one to become an adept in anything unless he gives his whole heart and time to it, applies in an especial degree to photography, as it includes as many branches or phases as there are trades or professions to which men can give their attention.

In spite of the fact that winter work may be as interesting as that of any other season we know that the great majority of photographers lay aside their cameras when the robin leaves and only take them up when sweet spring welcomes him back again, and for at least a decade we have considered that a fitting time to remind our readers of the adage and urge them to put it to a practical application.

Nor is it so difficult as it was when we began. With those whose aim is exhibition work, and in size anything between 10x12 and 20x24 there is now no question as to direct work in the field and enlargement from small

negatives, the latter being now better understood is often better than the former and offers greater opportunities for the introduction of the personal element, both in the making of the small positive and the enlarged negative, and especially in the printing. It may also, we think, be taken for granted that the basis of all photographic work, no matter what the ultimate intention may be, is a negative of a technique as nearly perfect as possible; a negative full of detail, steep gradation, but with nothing but the highest of high lights, if such there be in the subject, opaque, and with nothing but the deepest of deep shadows, with a like limitation, bare glass.

An ideal outfit for such purpose would be a 4x5 camera for either films or glass, or preferably both, bushed for a tripod which should be employed more frequently than not, and a lens of the anastigmat type working at F-5 or F-6. We may add a trustworthy shutter the times of which have been ascertained and

remarked; although time exposures should be the rule rather than the exception. Just how much of the plate should be covered with the subject is of secondary importance, except where lantern slides are likely to be desired, in which case it should be confined to about three inches the longest way so that they may be printed by contact.

The photographer with such an outfit and the knowledge of how to employ it to the best advantage is fully prepared for any branch or phase of photography that circumstances or inclination may induce him to adopt, and if he wishes to reach the top rather than be content to remain amongst the unknown, he must become a specialist—must choose one particular branch or class of subjects, and stick to it. Nor may he be altogether free to choose just what he would like best. Photography with the amateur is generally dependent on circumstances and conditions not always under his control, but generally at least, he can look forward far enough to know what his surroundings will be during the season, the kind of subjects that will be at his disposal, and his inclination will do the rest.

The ambitious will select portraiture and *genre*, knowing that success will bring the greatest honor; and will find subjects everywhere. But success in portraiture and *genre* depends on a combination somewhat rare—a photographer who knows just what he wants and a subject or model who can help him to it. But, as we have said, success will bring great honor, and is worth working for, one or two pictures on the walls of the salons that will set the critics a talk-

ing being sufficient to give a lasting fame. It may be well to add that with portraiture in view a small angle even for the small negative is desirable, and that for the 4x5 negative the lens should not be shorter than eight inches, and ten would be better. The amateur portraitist has the great advantage over his professional brother that the model will be satisfied with what he wants rather than insisting on what he or she thinks best; and so be able to give his whole attention to the inner rather than the outer ensemble, to show, if possible, what he thinks they are rather what they seem or effect to be.

Doubtful of his own ability or in the absence of suitable models, the photographer may take to the less trying landscape of which there are many branches, any one of which may lead to considerable honor in the pictorial field. If his lines are laid in the country he may make his work educational as well as pictorial by following up some phase of agricultural life, say, from the sowing of the winter wheat to the thrashing of the crop; or the planting of the "corn" (maize) to the husking thereof, every stage of which would furnish ample opportunities for *genre* or any other style of work. Or he may interest himself in recording village life in its various phases; show the effect of the seasons on the flora and forest of his district; or, adopting the beaten path of landscape pure and simple, exercise his pictorial ability in showing to others its beauty spots, not as they are but as he sees them.

Nor has the denizen of the town less opportunity for picture making. The old and the new, by night and by day and during every hour of the day,

as on hardly any two hours do the streets offer the same pictorial conditions; and the depicting of its sins and sorrows as well as its joys and rejoicings, hold out to the master hand endless opportunities for pictures that should go home to the hearts of all who saw them. It has been said that the mission of art is to give pleasure, but we can imagine a set of pictures by the right man depicting "the sins and sorrows of a great city," that while bringing the tear to every sympathetic eye, should make famous any salon in which they were hung.

Great also are the pictorial opportunities of those near the seaboard or the vicinity of the greater lakes. In fact there are opportunities every-

where for those who look for them, the one thing needful being the temperament to take advantage of them, and without that they will neither be found nor made good use of if they were.

Given, however, the temperament, it is with photographers as with painters, neither can be a jack of all trades and do all things well. He that would reach the top must select what temperament assisted by opportunity inclines him to, and throw his whole heart into it; and having secured a season's collection of small negatives he has before him a time of as great if not greater pleasure in the making from them of larger ones. How best to do that shall be told in future articles.

SOME "DO'S" AND "DONT'S" WITH THE HAND CAMERA.

BY OSCAR VON ENGELN.

Again the season approaches when to the number of the faithful few who brave wintry blasts to ride their hobby, the multitude whom fair skies only tempt forth with the camera is added. A good-natured, comradely crowd they are, too, one of the faithful tells

me, "but they do ask terrible questions of a fellow whom they catch with a big plate-camera and heavy tripod while he is waiting for just the favorable second when all conditions are right before pressing the bulb. And the way they back away from

everything in the foreground when they attempt landscape makes one feel like 'butting in.'"

He voiced a sentiment in this last sentence which every one of the workers who are striving for the artistic in photography and who have developed plate or films for their kodaking friends will echo.

One of the first things which the beginner should learn is that the camera with lens of ordinary focal length was never constructed to take a picture which embraces the whole horizon line.

This is a principle hard to grasp because one feels that one ought to have a sort of space cleared for action from which one is to operate. Otherwise the novice thinks he will not be able to distinguish the woods in the picture on account of the trees. It does seem disconcerting to have some big thing poking itself up right in front. Yet it belongs there, and he ought to look for it, and not fight shy of it.

Recently some twelve dozen films taken on a camping trip were brought

to me to develop. The men who had made the negatives had progressed so far that they did not try to do impossible things with the camera and all of the films developed into fairly good negatives technically, but the

prints from them were heart-breaking failures, artistically and interestingly considered. "Artistically and interestingly" is redundant, an artistic print is always interesting. They lacked, these prints, foreground interest.

I cannot do better than show you a few of them. Consider first the one with the sailboat lying inshore. Here

was a chance for a capital picture with a panorama kodak used at a point two-thirds of the distance further in, or for a vertical picture of the boats alone taken from a distance of about forty feet from them. But the picture, as it now stands, could have been retrieved by introducing a row-boat pointed shorewards at the spot marked X. This would have given the necessary proportion. Look now at the picture into which the oar projects (an accident, I am sure), and note that although this picture contains little otherwise but sky and water (a type which is monotonous enough ordinarily), it yet gives us a distinctly pleasurable sensation. This is simply because we grasp the point of view, that stray oar is fascinating in its suggestiveness.

The two pictures of the mountain-top (the pictures were all taken in the Georgian Bay country) illustrate this further. The one with the figure is

more interesting; one gains from it a real impression. How much the vaguest kind of a foreground does toward making a picture can be realized by examining the view with the foreground of reeds.

The dictum is simply this: There must be something near at hand to serve as a sort of frame to the picture and give us something to which we may fasten everything else for comparison or contrast. Just what this shall be the photographer must judge for himself, as he must know how it is to be introduced, and must also learn how to select a point of view which will enable him to include some desirable feature of this kind. Of course, a picture can be spoiled by some incongruous insertion, though the chances are great for improvement in any case. However, it is well to avoid barbwire fences and telegraph poles.

Another point with regard to the introduction of figures. If there be any suggestion of motion, let those figures which are moving into the picture (i. e., which have their backs toward the observer) be in the foreground, and those coming forward be back in the middle distance. This is a good rule, and the reason for it is that unconsciously we demand that the mover be given space to exercise. Do not think now that if your figures are in the background and are to be the center of interest that you can dispense with a foreground interest. Select a tree, a stone, anything for this, but have it in.

The judicious placing of a boat, figure, rock, or branch of a tree has often converted into a picture what would otherwise have been only a luckless snap shot.

PLATINUM TONES ON GLOSSY PAPERS.

By JAMES THOMPSON.

IN the directions that come with Solio and similar Chloride of Silver gelatine papers, we find but one method of toning usually recommended, which gives a range of tones in brown more or less extended. When black tones are exploited, we are told that we must resort to double toning; first in a gold bath, by which the browns are made possible and again in platinum.

There are no objections to the browns for such subjects as portraits and some landscapes, but for snow pictures, marines, and similar emanations some other color is an essential, for a brown snow scene seems ridiculous, and I think it will be admitted a waterscape should be delineated in some other color, possibly blue or blue-black.

As regards the toning of the class of papers before mentioned, it has been asserted the double toning—first with gold and then with platinum—is essential to the production of black, because of some chemical objection to single toning in the coating of the paper.

That the difficulty is real, and not fanciful, must be admitted, for were it otherwise black and white Solio and similar prints would not be so uncommon as they are, for a glossy picture of such character, it must be conceded, is a thing of beauty.

Some little time ago in experimenting I found myself getting platinum tones on glossy paper with that metal alone. The whites were of the purest, but that the blacks were true, I am

not prepared to affirm. They are rather on the purple and brown side but so near a true black that the average person will never detect the difference. The color is at least as good a platinum as that seen on the usual Aristo-Platino photograph sent out by the professional. I have had much printing done for me in that medium by one of the most experienced and careful manipulators in Boston—a man who does work for high-class professionals—and in the product I have often seen specimens with a purple cast to the blacks.

Well, the blacks that I am getting will compare favorably with this work, and I tone in platinum alone. Deep printing is, however, essential for best results, for prints from flat negatives have a mealy, faded look. The platinum seems to require a rich silver deposit in order to assert itself profitably, but such is the case also with Aristo-Platino, for where strong contrasts are absent the print is apt to be a failure, and had better be made on some other medium.

For toning by my method printing should be two or three shades deeper than is desired in the finished picture. The print should be well washed, say for ten minutes, and then transferred to the platinum bath which should be made up as follows:

PLATINUM STOCK SOLUTION.

Chloro-Platinite of Potassium... 15 gr.
Phosphoric Acid, 50%..... 2 dr.
Distilled Water to make two fluid ozs.

Dissolve the Chloride Platinite in part of the water, add the Phosphoric

Acid and then the water to make up the two ounces. Use of this stock solution about $2\frac{1}{2}$ or 3 fluid drams to each 32 ounces of distilled or boiled water. Then with a medicine dropper add *sixteen drops* of Nitric Acid and mix thoroughly. Use a sufficient quantity to cover the prints, but it is more satisfactory to treat one at a time, unless they are kept moving. In about five minutes throw away the bath, replacing with fresh, and if the toning does not proceed rapidly, add a drop or two of platinum from the *stock bottle*, taking the prints out meanwhile. The prints will quickly turn purple, then a blue-black, but they should be kept in the toner until all redness has disappeared, for any of *that*, would show brown in the finished print. Wash for five or ten minutes, then fix in Hypo as for Solio, say 20 ounces of water in which is dissolved an ounce of Hypo. Fixation for from ten to fifteen minutes will be sufficient, washing for an hour as usual.

Some times the prints are not as black as one would wish, when manipulation is completed, but when drying they seem to assume a blacker tone so that the finished prints, where contrasts are strong enough, are rarely other than pleasing. The fingers should not be permitted to touch the face of the prints, or toning will be uneven, moreover washing before and after toning is essential where pure whites are desired.

In place of the regular Chloride Platinite the Aristo-Platinum or other solutions may be substituted, with the necessary addition of the 16 drops of Nitric Acid to each 32 ounces of dilute toner.

[The print accompanying this article, a rose from a negative full of most delicate gradation, leaves nothing to be desired. The color may be described as a warm black, perfectly even throughout, maintaining the same character even in the most delicate shading.—Eds.]

SPRING AND WINTER WORK

BY CHAS. S. TAYLOR.

The leafless trees, standing in rugged simplicity, are the elements of many fine and satisfactory photographs, if rightly handled. To the amateur who has just resolved to stop making "recordgraphs," the next two months are complete with ideal conditions for tuition. The lack of foliage with its spotty lights and too often bothersome detail, is a great help to the embryo pictorialist. At this season of the year our eye more nearly coincides with that of the lens—we see

the view as it will appear in the print—in monochrome, and the absence of summer colors will less confuse the inexperienced.

There is one great fault with most winter photographs, and especially those who have just realized the importance of serious work, and that is a too crowded picture. The charm of the leafless tree can best be expressed by avoiding all complex compositions, for simplicity cannot be made by a too abundance of material. This

avoidance of over-crowding is the most difficult of all the many problems that confront the amateur, no matter what the season of the year. Many a pleasing view is so bound together by elaborate parts, that were we to remove the least striking portion, the whole picture would fall apart, as it were. In your tramps about the country, this form of nature composition will occur many times. It frequently happens that the point of view is almost altogether responsible for these inseparable elements, and a change of view point will frequently put matters right. Walk all around the object of interest, consider the different aspects of the scene thoughtfully, but by no means expose a plate unless you are satisfied absolutely. Of course, you might trust to luck, but then it will be like so many others, where this broadcast snapping is so very evident. Don't risk it. Remember you are no longer a person of "quantity," but of "quality." It is hard to resist the impulse I know, yet sound judgment must be considered, and the childlike snapping whim must be stoutly put down.

A group of trees, the ice-bound brook with its older fringed banks, the path up the snow-clad hill,—all of these are subjects of strong interest. There is in fact, an abundance of material everywhere, at your very door perhaps, if you will but see it.

The sky, while a valuable accessory towards improving a winter-scape, is by no means as necessary where the chief motive lies in the trees themselves. If a sky is utilized, whether natural to the view or printed in, care must be taken to keep the clouds secondary in interest. They must

never vie with the fore or middle-ground in importance, one or the other must be the principal object of interest. Another point is the atmosphere, which contributes in so successful a degree to both photograph and painted landscape. This state of the air is at its best in the fall, winter and early spring months, and so often absent in summer. This misty veil is of the greatest assistance to the photographer, clothing common-place scenes in a garb of suggestive mystery, softening harsh outlines, and subsiding undesirable detail. Its magic of fingers change even the ugly shapes of a modern building, into an object of beauty, and we have only to look at the works of that great master of landscape—Turner—to appreciate in full its fascinations.

The question of exposure and development is of importance as some difficulty is encountered. Exposure in winter should be much longer than in summer, the light being of less actinic power—though seemingly bright. The dazzling reflective power of the sun-lit snow must be allowed for, of course, but even here more time is necessary than in summer. The light after noon rapidly decreases in strength, and during the late afternoon is much weaker than it really appears. Mist and fog also require consideration and allowance. An exposure metre may assist the beginner, yet it has always seemed to me that one should depend more upon his judgment and the brilliancy of the ground glass image.

Perhaps one secret, if there is one, in development, is to have the different solutions of a uniform degree of temperature which we may call 60 de-

grees. The dishes and graduate should be warmed. As a cold fixing bath is of a very slow action, it is well to warm this also. By keeping the

temperature of solutions to an even degree and using a diluted developer, many an otherwise failure would turn out successfully.

WORDS FROM THE WATCH-TOWER.

BY WATCHMAN.

In a paragraph under the caption "The growth of dissatisfaction," *Photography* gives utterance to the following words of wisdom that should be pasted in the hat of every would-be pictorialist. "Depend upon it, to be satisfied with one's own work, to be unconscious of its defects, and unconscious of the way in which other work compares with it, is the greatest barrier to self improvement which any photographer can find across his path." Bad as that is, there is a worse, or rather an intensification of the evil in the cruelty practised on such self complaisant ones by those who do know and are known to know better, by the praise they give to such over estimated work—to waste of material; rather than hurt the feelings of the misguided ones.

* * *

Crystoleum, in one or other of its various names, has probably been more frequently exploited and even patented than anything else connected with photography. I was not aware, however, till I saw *The Photographic News* of February 17th that it was older than photography, as old indeed, at least, as 1688, and even then there is indication that it was not quite new, the author of the book published on that date, alluding to the practice of "Certain Mistresses" of which he did

not approve. The author, John Stalker, fastens the print on a glass plate, moistens it, and then rubs the paper away; and then gives full directions as to the laying of the color on the back, being particular as to each particular color for each special kind of subject. John Smith follows in 1723, at least that is the date of the copy in the patent office, of his "The Art of Back Painting;" but it bears *prima facie* evidence of being a second edition. Then, we have a Frenchman, M. Vispre, telling "How to become a painter in three hours," his book taking the form of a dialogue between himself and a lady, who, at the close of the instruction, invests in a complete set of the necessary material and begs him to disclose his address in Paris; and an Englishman, Carington Bowles, in 1783, apparently the first to suggest the use of Venice turpentine, although that was only to fasten the print to the glass, the paper still being rubbed off by the finger; and lastly, before the introduction of photography, a book by M. Watin in 1828, although that was a tenth edition.

On the appearance of photography, or rather when printing on albumenized paper became popular the method seems to have changed. There was no longer need to remove the

paper from the film, only to render it translucent, and for that various methods have been adopted, the best, or at least the one that I used to find most successful, was the application of a solution of Venice turpentine, and later Canada balsam in turpentine, just such a mixture as is being now recommended for the making translucent of paper negatives made on bromide paper. But paraffin and white wax have both been successfully employed, and for some subjects they are better than the diluted balsam. In connection with the use of the former there is a story which I think I have told in these pages before but it will bear telling again; especially as I was the means of spoiling the little plan of an at one time well known New York photographer who expected to cover the cost of a European trip by the sale of a well known secret.

With a name almost as a household word in the days of the Daguerreotype, although he does not seem to have succeeded so well when the simpler methods displaced it, and probably thinking he had earned a well deserved rest with enough to keep him in comfort for the rest of his days; resolved to leave to the younger generation the battle under the new conditions. With leisure came, as usual with Americans, the desire for the European tour, and equally as usual amongst professional photographers, not having been a student of photographic literature, he thought he had a secret to sell that would cover all his expenses. Unfortunately perhaps for him, he came first to Scotland, and I am under the impression did some business in

Glasgow; probably coming on an Anchor liner and landing there, and then he appeared in Edinburgh. He began operations by going through the best studios in the city showing some really fine colored photographs, all the more striking from the fact that they were prints given to him by some of the best men in the city: Tunny, Moffat, Ross, etc. "Give me one of your prints, the better the print the better the result, although often a print so poor that you would be ashamed to send it out, will, by my method be such as to meet with favor everywhere, and in an hour I shall return with it colored as fine as any of my specimens; and for five guineas shall teach any one of your spotters, retouchers, or reception girls to do it as well in half an hour." This was a flattering offer, but Scotchmen are cautious and even with minds made up, take a time to think it over, and the result was fatal to the American.

I had large experience in the waxing of paper, having been commercially engaged in supplying wax-paper for that excellent process, and one of the specimen colored prints having been left with Tunny, the one weak point of the American's method of trying to do business, I was sent for, and the result was the discovery that the *new* method was as old almost as photography itself, simply the saturating of the print with paraffin, and that not by the best method; by scraping the paraffin over the back of the print and distributing the scrapings by a hot iron. This we learned by certain irregularities in the waxing which do not appear when the print has been floated on melted

paraffin, the most approved way and the way generally adopted. In a consultation next day we discovered that our diagnosis had been correct, and the next number of *The British Journal of Photography* thoroughly put its foot into the American's hopes of paying the cost of his trip by the sale of something that already was well known.

By coloring from the back, however, very beautiful pictures can be made, and the wonder is that it is so little practised. Prints on the ordinary printing out paper cannot be so treated because the baryta coating between the paper and the gelatine or collodion film prevents the necessary translucency. The prints should be on thin albumenised paper, paraffin wax scraped finely over the back, that is when only a few prints are to be made at a time, and the paraffin melted and evenly absorbed by the use of a hot iron and passed over and over the print between several sheets of blotting or absorbent paper. This makes the print sufficiently translucent for all purposes, and the color is laid on, each in its proper place but without any particular care, the photograph giving the lines and light and shade. A few trials will show how easy it is to make beautiful pictures; and a professional taking it up as a side line could not fail to get for a single copy made on speck as much as would pay for ten times the time and material employed, besides adding another attraction to his studio.

* * *

Those of our friends who are fond of thinking that photography is on the wane were rather staggered

same time ago when they heard that one and another of the Secessionists were getting \$50 for a single print, I wonder what they will think when they read or hear of the paragraph in *Camera Craft* by H. C. Rubincan, in which he says that a friend of his in Fifth Avenue, New York, made for a New York gentleman eighteen prints for which he charged \$900, and he adds that his friend *really got the money*. Fifty dollars for one print does not seem so astonishing as fifty dollars for each of eighteen and all at one time. No, photography, or at least pictorial photography, is not on the wane, but is just beginning to be recognized as a means of artistic expression, and valued according to the ability of the artist who employs it.

* * *

Everybody will sympathize with the Sisters Gerhard in St. Louis; who, through a fire in their printing room, lost the entire work of the season, or rather of the existence of the great Fair, in the shape of negatives from which they might fairly have expected to realize a little fortune. The following account I clip from *The St. Louis Photographer*, although I think the \$300 is ridiculously low as to the value of negatives likely to be in such demand:

"One of the most valuable collections of photographic negatives in existence was completely ruined by a fire which originated in the printing room of the Gerhard Sisters' studio in St. Louis.

"The collection contained 300 negatives on plates 18x22 inches, and represented months of hard work by the Misses Gerhard, who labored during

the entire period of the World's Fair to secure a photograph of every tribe and nation represented at the Exposition. Patagonians, the hairy Ainus, Oriental, Russian and Tyrolean dancers, geisha girls, Esquimaux, Cliff Dwellers, various Indian, Chinese, Japanese, Pygmies, Igorrotes, Moros, in fact, every kind of people represented at the Fair was photographed in their respective costumes. Not only was it the largest ethnological collection in existence, but the Misses Gerhard state it was also the only collection of large negatives of the kind in the world.

"It is impossible to estimate their value. Some of the best ones, such as Antonio, chief of the head-hunting Igorrotes; the snake dancers, the Bedouin boy and the cannibal had been priced at \$300 each."

* * *

There is more in a name than some seem to think. Considerable discussion has recently taken place in France and elsewhere on the use of an "acid developer," as if we were going back to the old method in which the reduced silver was got, not from the haloid salt in the film but from the developer itself. An examination of the formula, however, shows that the so-called "acid developer" is not acid but really alkaline, as it has been ever since the introduction of the gelatino-bromide plate. Here is the formula:

Water	1,000	c. c.
Sodium sulphite (anhydrous).....	20	grm.
Pearlash (potassium carbonate) ..	8	"
Pyrogallol	8	"
Potas. bromide (10%) solution..	3	c. c.
Acetic acid glacial.....	3	"

A certain, or rather uncertain proportion of the acetic acid will be tak-

en up in rendering the always alkaline sulphite neutral, and what is left is more than likely to be employed in converting the potassium carbonate into potassium acetate, leaving the whole in the usual alkaline state. I have not put the matter to the test and know how both the sulphite and the carbonate vary in alkalinity, but am pretty sure of my ground.

* * *

E. Hofinghoff, a German, has struck out in a new line in backing, returning to the film whatever light may happen to pass through the plate, instead of, in the ordinary way, absorbing it; and thereby, according to his belief, getting "a softer and more orthochromatic negative."

Instead of the usual colored backing he employs a phosphorescent material, a kind of luminous paint, exposing in the usual way, but deferring development for from twelve to twenty-four hours during which the weak image formed by the transmitted light continues to enforce the latent image and give to it the advantages which he claims. I have my doubts, but shall put it to the test and report in a future batch of "words."

* * *

ECONOMY IN GASLIGHT PAPER:—
The editor of the *Photo-Beacon* has been interviewing "a practical man, a successful business photographer," and with a result that should largely increase the demand for gaslight paper amongst professionals. By the use of gaslight instead of printing out or other paper, he had just trebled his net profits during the preceding year. This satisfactory state of matters arose from the facts that "He had been able to dispense with two-thirds

of his printing staff and curtail his printing space, these economies resulting in a net saving of over \$200 a month, to the great profit of his pocket."

* * *

"SAVE US FROM OUR FRIENDS":—What will "the average photographer" think of the editor of *The Professional and Amateur Photographer* when he reads what he thinks of him? Here it is "The average photographer has not been educated to the point where he can discriminate between the good and bad ideas advanced by many of our would-be advisers as to how to get more bust-

ness." And again "The average photographer has not had the opportunity of receiving even a common school education, for he has, in most cases, had 'to root, hog, or die,' and has been thrown on the world at too early a stage in his life to have had the advantage of a training that would have fitted him to cope with men of the world." This may be true of some, even of some that have risen to the top, and if so, all the more credit to them; but that it is applicable to "the average photographer" I have my doubts, although the editor of a journal specially devoted to their needs ought to know.

NOTES.

STRIPPING FILMS.—*The Photographic News* gives the following which although not quite the best is one of the oldest stripping methods, and while some others are more reliable it will be found suitable where only once in a while stripping has to be resorted to. The negative is first levelled and flowed with a solution of gelatine and allowed to set. It is then placed in a 5 per cent. solution of chrome alum for half an hour, cut through to the glass round the edges, and returned to the solution for another half hour when the film will be easily separated from the glass; and it will dry without alteration in size.

GUTTERING CANDLES.—A candle is simply a modification of a lamp, the container being the outer edge kept from melting by the cold current rushing up to supply air to the flame, and so making a receptacle for the melted composition of which the candle is composed.

In badly ventilated lanterns the heat prevents the formation of this receptacle and the melted composition runs down as soon as melted, or, as it is called, "gutters." The following method will largely at least, prevent this, although the better way, of course, is to see that the lantern is properly ventilated.

Twenty-five parts of magnesium sulphate and ten parts of dextrine are dissolved in from seventy-five to a hundred parts of hot water. When the liquid has got quite cold, the candles are dipped in it, right up to their wicks, and are then allowed to get dry. The coating which they have received helps to keep them upright and to enclose the melted wax, so that instead of running down the candle it is fed to the wick, vaporised, and burnt. We have not tried the dodge, as we very seldom have occasion for such an illuminant, but there is nothing on the face of it to suggest that

it does not fulfil what is required of it.

THE BAYER BACKING.—Since our last notice of the Bayer colored varnish as a backing we have continued to use it with unqualified advantage, as for ease of application, automaticity of removal, and perfect preventative of halation it leaves nothing to be desired. But the more thoroughly we are satisfied with anything the more anxious we are to find corroboration for our opinions, and therefore we gladly clip the following from *The Amateur Photographer*:

"From time to time the oft-repeated lament of the amateur regarding 'halation' is raised in the photographic press. Now halation is to all photographers a veritable bugbear, but to none more so than the architectural worker. I am one of these

latter, and as I have enjoyed absolute freedom from all halation troubles since using a certain backing, I am bringing it to the notice of others. I have taken views of interiors with the strongest contrasts of brilliant sunlight and heavy shadow, with both very long and short exposures; in no case has Bayer's red varnish failed me. Its pre-eminent good points are (1) its non-actinic color, (2) its ease of application, (3) its rapidity in drying, (4) and the fact that it does not flake off in dust in the dark slide, (5) its ease of removal. I have given it twelve months' careful trial before pronouncing an opinion, and having proved its unfailing excellence, I now recommend it to other amateurs, as a panacea for "halation ills." Needless to say, I am in no way interested in the Bayer Co., 19, St. Dunstan's Hill, London, the sole manufacturers."

TONING BROMIDE PRINTS.

This subject was dealt with by Dr. Bradley at the Southport Photographic Society's last meeting. The lecturer dealt particularly with the properties of vanadium chloride as a reducing agent and as a salt serviceable in bleaching bromide prints. It acted slowly but bleached perfectly, especially with the help of hydrochloric acid. He usually added an ounce of vanadium chloride to six ounces of water, but it was very difficult to dissolve.

Amidol was the best developer for bromide prints that were to be toned; and the process did not answer with papers that contained iron. The prints should be well washed, and the hypo bath should be strong.

The composition of the bleaching solution was:

Saturated solution of vanadium chloride	2 drams
Potassium pyrophosphate..	2 "
Potassium ferricyanide ...	30 grains
Water	10 ounces

The print bleached in about ten minutes, and should then be washed for fifteen minutes in running water, when it may be redeveloped, and the best metals with hydrochloric acid to produce a pleasing picture were: Ferrous sulphate for blue tones, ferric chloride for bluish green, copper chloride pinkish brown, uranium nitrate

or chloride solution for a brilliant red-brown.

The processes of toning by the metallic salts were very interesting, and gave good results, and by means of Schlippe's salt some very fast colors could be obtained. The bleached print being immersed in a five per cent. solution of this gave a yellow image. This should be transferred without washing to a weak solution of ammonia for ten minutes, and then washed in running water. It may then be developed by weak metallic salt solutions. By this method double

tones were avoided. For slow contact papers platinum chloride or potassium chloroplatinite gave brilliant colors, especially in the brown shades. The bleached print might be redeveloped with weak hydrokinone, which produced pleasing colors, but they were not always identical. With lantern slides, however, the colors were very bright, with no tendency to fogging, and a rich brown, clear in the high lights, could be got with ease by toning with Schlippe's salt and subsequent treatment with a mineral salt and acid.—*Photography*.

INTENSIFICATION BY RE-DEVELOPMENT.

BY C. WELBORNE PIPER AND D. J. CARNEGIE, M. A.

With the exception perhaps of development, no operation in photography has been so frequently discussed and none remains so unsatisfactory as intensification, and so long as it was dependent on mercurial bleaching and subsequent blackening it was bound to continue so.

In the following article which we extract from *The Amateur Photographer*, the authors seem to have struck the nail fairly on the head, and we shall look for the promised further communications with interest. In the meantime, however, there is sufficient in the following to enable our readers to satisfy themselves as to the advantages of the new method.

Considering the notoriously unsatisfactory nature of nearly all the processes of intensification now in common use, no apology is needed for introducing a new method that, so far as we can at present judge, is free from the defects of the others. Among the older processes it is difficult to find one that can be described as both simple, to carry out and productive of definite permanent results. Of the mercury

processes none, except mercury and ferrous oxalate, can be considered to give permanent results, and as the satisfactory working of that process is by no means easy, the most popular mercury processes are the simpler unreliable ones. Silver methods are theoretically good, but in practice they are troublesome and expensive, and, therefore, little used. Uranium intensification is always non-permanent, and is unsuited for general work, while copper methods are unreliable in that they often produce quite ineffective results. A piece of tissue paper laid over the printing frame is quite as effective as some of the published copper processes, and is much less trouble. In fact, in all the numerous processes available we cannot find one comparable for simplicity, effectiveness, and reliability, with the one we are about to describe; nor yet one that appears to be so absolutely under control and free from limitations.

In all processes which involve bleaching the image and redevelopment it has hitherto been assumed that the addition of mercury (or some other metal) is essential to the increase of density, and the fact that this addition may, under certain conditions, be quite superfluous, has been entirely overlooked. In our process we simply rehalogenise the image *without adding any metal whatever*, and then redevelop, with the result that we obtain as much density as is commonly produced by the addition of mercury. An exactly similar process to ours has long been in use for certain other purposes, such as the removal of stains, and it is very astonishing that no one seems to have before noticed that the procedure is capable of producing an enormous amount of extra density. It is difficult to see why the mercury processes should be relatively so inefficient, for the addition of metal should certainly produce a much more appreciable effect than it commonly does, but the most probable explanation appears to be that these processes are not at present thoroughly understood, and, therefore, are not applied to the best advantage. It does not, however, appear to us to be worth while endeavoring to increase their efficiency, considering that the new process seems quite good enough to replace them altogether.

The method that we at present advise is as follows:

Bleach the image in the following solution, which must be made up precisely to the formula:

Potassium bichromate,	10 grs.
Hydrochloric acid,	5 mins.
Water to make	1 oz.

Leave in the solution until perfectly uniform and similar effects are produced on both sides of the image, which will be in two to three minutes with a fresh solution; then wash until all bichromate stain is removed. Next give a momentary exposure to the brightest light available, develop with any ordinary developer, and wash well for twenty minutes.

The whole operation is conducted in the light, and the special exposure to bright light is only advised to hasten development, which, if very much prolonged, may possibly stain the film. We have used successfully the following developers: Pyro-soda, pyro-ammonia, hydroquinone, metol, hydroquinone-metol, ferrous oxalate, amidol and glycin. Any of these seems to work equally well, but we do not recommend ferrous oxalate on account of its inconvenience. We have most often used amidol, of the strength of 5 grs. to the ounce, with 50 grs. sulphite, and no bromide. In any case we recommend the omission of bromide and the use of a strong developer of at least the concentration used in ordinary negative work. In selecting the developer it must be remembered that the process tends to eliminate any developer stain which may already exist, and a negative showing pyro stain may be so effectually cleaned in the process of intensification that the gain in density is more or less counterbalanced by the loss in stain. This has occurred in one or two instances in the course of our experiments, when intensifying stained negatives by redevelopment with amidol; hence with such negatives we advise generally the use of pyro for redevelopment. If, however, the stain is very intense its

partial removal may be a great advantage, in which case a non-staining re-developer should be used.

Washing is all that is absolutely necessary after development, but a small residue of undeveloped silver salt may remain in the film, and the brief application of a hypo bath will then slightly clear the image and produce a cleaner result. It will not affect the density to an appreciable extent unless development has been cut too short. The time of development need not, however, exceed from three to four minutes, and the process is generally complete in less time. We do not specially advise the hypo bath, as its effect is generally quite unappreciable, and its use necessitates longer washing. To avoid stains keep the plate perfectly covered with the developer, and do not develop in bright sunlight; such a proceeding is quite unnecessary if the plate has been previously exposed, and strong light facilitates the production of stains. After an exposure of a few seconds in bright sunlight, or of, say, half a minute either at the window in diffused daylight, or at a distance of three inches from an ordinary gas-burner, the image will develop quite readily without being near any strong light. If these precautions are observed, and a clean, fresh developer is used, there is not the slightest probability of any stain appearing.

Washing after the bleaching operation is the most lengthy part of this process of intensification, but it can be considerably abbreviated. Wash in a dish under a good stream of water until the greater part of the yellow bichromate stain has disappeared—one or two minutes is generally sufficient

to produce this effect—then remove the rest of the stain by pouring repeatedly on and off the plate a 2 per cent. solution of either potassium meta-bisulphite or of sulphite of soda, acidulated with a few drops of sulphuric acid. The solution should just smell of sulphurous acid. It must not be used for many plates in succession, and should be thrown away immediately if it shows any trace of a bluish coloration. By rocking the dish the bleaching process can also be considerably hastened.

The bichromate bleaching solution will keep indefinitely if not used, but it deteriorates slowly by use. A stock bottle should be kept, and the amount required for use (about two ounces for quarter-plates) may be put in a smaller wide-mouthed bottle and used repeatedly until its action begins to slow down. One-quarter of its bulk should then be thrown away, and an equivalent quantity of fresh solution from the stock bottle can be added to the working bottle.

It must be particularly noted that the precise amount of intensification reached depends absolutely on the proportions of the bleaching solution. The formula given will produce a useful degree of intensification equal to, or perhaps slightly greater than that given by mercury and ferrous oxalate (when a 5 per cent. mercury solution acidified with hydrochloric acid is used), but less than that produced by mercury and ammonia. It has been specially adjusted to give that effect, but by the time this article appears we hope to be able to give some other formulæ giving various degrees of intensification from a minimum useful quantity up to something probably ex-

ceeding the effects of mercury and ammonia. The formula given here will not produce the maximum intensification in one operation, but we have not yet completed our experiments in this direction, so cannot say what is the maximum possible. We have, however, found that the process of intensification with any one solution may be repeated an indefinite number of times. Two intensifications with the solution described give an effect about equal to that produced by mercury and ammonium sulphide, while three give more density than is likely to be required. On account of the uncertainty

densities shown in strips 2 and 3 could be reached in one operation with different formulæ, and the fact that a given density can be attained either by repeating the process or by employing a modified solution, is one of great practical value.

When the process is repeated the developer must be washed out completely before reapplying the bleaching solution, otherwise stains will probably appear. The first bleaching gives a nearly white image, but each repetition gives a darker result, and the color gradually becomes a yellow brown. This may be readily distin-

of the results of the various mercury processes an exact comparison is impossible.

The cut shows positive prints from a series of strips cut from one negative. Strips marked O are unintensified. No. 1 is treated once, No. 2 twice, No. 3 three times, and so on up to No. 5, which has been intensified five times with a solution adapted to give a small increase at each operation—not with the solution given in this article, which, if repeated five times, would give an unprintable amount of density. This illustration shows the possibilities of the process. The

guished from the bright bichromate yellow stain which exists when washing is incomplete.

The process is excellently adapted to lantern slides by reason of the fine black tones it produces. The action is very rapid, with the thin lantern plate film, and a slide can easily be treated once and left to its final washing within five minutes from the start.

One of the great advantages of the process, as has already been said, is the step by step method by which any degree of opacity may be obtained, as is well shown by the above illustration. The part of the film

marked with O represents the original negative, 1 shows the effect of one intensification, 2 the second and 3 the third; it being possible by repeated applications to produce complete opacity.

As the result of several experiments we may say that the method is both simple and satisfactory, although we think the authors do not sufficiently urge the necessity for *thorough* wash-

ing after the halogenising. It should be carried on till every trace of the yellowing caused by the bichromate has been removed—till the film assumes its original creamy appearance and only the brown image remains; as when that has been accomplished there need be no fear of staining, something of which is almost certain to appear unless the washing is complete.

MORE LIGHT ON THE STEADMAN SYSTEM OF TIMING EXPOSURES.



THE official adoption of my method of measuring light by the Photographers' Association of America at their Convention in St. Louis, October 3rd and 8th, 1904, will make the following concise description of that system welcomed by all who are interested in photography.

That part of the resolutions which refers to the method and to the speeding of the emulsions is as follows:

"For the standard paper for the measurement of light intensity, we recommend solio and all printing out papers which, on measurement, shall be found to agree with it in sensitiveness."

"For the standard amount of work that the light shall do we recommend that degree of discoloration which becomes first plainly distinguishable from the original color of the untinted paper. Such tint to be made through a hole in any thin opaque material, as the corner of a note-book, the cover being raised to observe the tint."

"For the scale of values we recommend the following as practicable: one-eighth, one-fourth, one-half, one,

two, four, eight, sixteen, thirty-two seconds, one, two, four, etc., minutes. For greater accuracy the interval half way between any two of the scale may be used, as three, six or twelve seconds. The shortest interval, one-eighth of a second, is the intensity of the light out of doors on a clear day with the sun from fifty to ninety degrees above the horizon and no shorter or greater intensity therefore exists under ordinary natural circumstances."

"Furthermore, as to Mr. Steadman's method of speeding plates, we recommend that the Association officially request each and all of the plate and film manufacturers of the United States to investigate the method with a view to establishing a uniform system, should the method be found practicable."

The photographer should be an adept at counting time. Without this ability there is always a feeling of inaccuracy. Practice the following method unless you already have one which is accurate. Arrange a note-book as described and without using the sensitive paper, practice slipping a

coin off and on the hole as the following word or phrase is spoken:

For a quarter second say, "Quarter."

For a half second say, "Naught - one - half."

For a second say, "Naught - one - half - and - one."

For any number of seconds say, "Naught - one - half - and - one; one - half - and - two; one - half - and three," etc.

Practice until the hand will move exactly with the speech. Practice while looking at a watch and get the correct speed. Always use the method in all measuring of light and in making exposures. This is important. If it is neglected it will be at the expense of accuracy.

Become familiar with the "disappearing scale" of tints. To make this scale arrange the solio strip under the hole in the cover of the note-book as directed and cover it with a coin. Then stand close to a window or door and holding the book facing the sky outside, give sixteen seconds of exposure. Then move the slip along to a fresh place and give an exposure of eight seconds. Change again and give four seconds, etc., down to one half second. Now examine the strip and if the day has been at all bright several tints will be visible. Select the last one or the faintest visible one and the time required to make it will be the actinic of the light in that position, expressed in seconds according to the standard method.

Use this method of THINKING of the intensity of the light. Any illumination IS of a certain intensity whether we measure it or not. We might as well know what that inten-

sity is in numbers. The practiced photographer in the middle of the day need not make the measurement at every sitting, but he should have in mind the intensity of the light in seconds and should occasionally measure it so as to familiarize himself with the method of thinking. Then if later in the day or if a cloud should come over the sun, a new measurement would reveal *exactly how much weaker the light is* and the relation of the exposure to the correct exposure in good light would be known. In this simple manner and without employing any method whatever the measurement of the light in seconds would be of great value to all photographers and especially to those who are not already in the business for many years.

As to the out-of-door conditions: If the day is clear and the sun high the intensity of the light is practically 1-8 of a second. If the sun be about thirty degrees from the horizon or 1-3 of the way to the zenith, the intensity is about 1-4 second. These conditions therefore never need be measured. By making the "disappearing scale" out of doors, when the sun is high, or by making exposures of one, one half and one quarter second, it can be seen at a glance whether the quarter is the faintest or the second step of discoloration. If it is the faintest, then the quarter second is the intensity. If it is sufficiently deep to be the second tint in the scale, then it would be known that one-eighth second would be the intensity, and this without really making that tint. This is known by being familiar with the "disappearing scale" of tints. Every photographer, to be free in his work, should understand for himself the reason for using

a certain speed diaphragm to express the speed of a certain plate and subject. The following simple experiment will make this clear, and the work is worth doing, as the principal thing is to *understand why* certain things are true and not have to take for granted what some one else chooses to say about them.

Place a person of average complexion in your light as you usually work. Carefully take the measurement of the light at the position of the sitter's head, turning the solio or other P. O. P., which tints as fast, directly toward the strongest light source. The number of seconds that first reveals a *just plainly seen discoloration* when you raise the cover of the notebook to look for it, is the intensity of the light expressed in seconds. Now make a number of exposures with *different diaphragms*, giving the *light intensity* as the exposure each time. (If you have a multiplying camera so that you can make a number of exposures on one plate so much the better.) Then *with normal developer at normal temperature* develop the plate or plates together for a normal length of time, or to get a perfect negative from the exposure which seems in the developer to have been correctly exposed. Fix the plate or plates and examine, selecting the one which best suits your individual taste. The diaphragm which was used in making that particular exposure is called the *speed diaphragm* of the subject taken and is the one that will *always* make the same effect in the emulsion *if you give the intensity of the light as the exposure and a like subject be photographed*. Now construct your own speed list of subjects by calling that

diaphragm the speed diaphragm for averaged complexioned portraits. The next smaller one will be the one for very fair, and the next larger for very dark complexions. But if in practice you generally use a certain diaphragm you can tell what part of the light intensity to give by knowing the relation of the diaphragm you used, to the speed diaphragm of the subject that you are photographing. If the one you will use is two numbers larger than the speed diaphragm of your subject then the exposure will be 1-4 of the light intensity, if it is three numbers larger it will be 1-8 of the intensity, etc.

Any worker in the same manner can make a speed list for all the kinds of subjects that he photographs and the plates used will by no means be lost, as they will enable him to solve once for all the problem of exposure so that a plate need never afterwards be lost.

In this manner also the development of plates can be done with the greatest possible simplicity. This is so because a plate that is perfectly exposed needs no modification in development. It is irrelevant to discuss whether it is *possible* to modify in the developer or not! It at least is unnecessary if the exposure has been correct. When the list of subject diaphragms shall be placed in every box of plates the worker will need only to look at it to see the diaphragm for the subject in hand that harmonizes with the light intensity exposure. If for your taste a modification is found necessary you can determine the diaphragm that best suits you at the first trial. If the result is over-timed according to your taste then place the speed diaphragm

HOME PORTRAIT

Homer W. Gilbert

A QUIET EVENING

F. M. Braddock

OLD MILL

Wendell G. Corthell

PADEREWSKI

Arnold Genthe

of that kind of subject at the next smaller or even perhaps two numbers smaller. Place it exactly where you want it to be so that the intensity exposure will suit you. If these helps are taken advantage of not a plate need be lost by wrong exposure.

I am pleased to say that two of the largest plate factories have already taken steps to include the system in their manuals and to publicly sanction the speed list that I hope to have ready for publication soon.

FRANK MORRIS STEADMAN.

HALF-TONE SCREENS.

By MAX LEVY.

Half-tone reproductions are now playing such an important part in photography that our readers may be interested in knowing something about the evolution of the screens that make them possible. We therefore have pleasure in reproducing the following paper by Max Levy, of Philadelphia, probably the most successful screen maker in the world, which was read before a meeting of The Royal Photographic Society of London:

I feel honored by the request of your Society for a paper on the subject of the half-tone screen. The nature and procedure of screen work are so well known as to make it difficult to give any information on these points that will be novel, interesting, or instructive. In the usual perplexity as to method of treatment for a prescribed subject, I concluded that a short sketch of the development of screen work from the standpoint of my own personal experience and knowledge would probably be more acceptable than some more abstruse and technical discussion of the subject.

It is interesting to note at the threshold of our story, that Niepce, in the earliest days of photographic history, was working along lines calculated to produce a printing plate direct from nature, and that Fox Talbot, early in his exhaustive and brilliant researches, worked along similar lines, and indeed produced some extremely satisfactory plates for intaglio printing direct from na-

ture. These results and indications justified, from the earliest inception of photography, the firm conviction that the process would ultimately lend itself to the rapid and facile methods of the printing press. It was this obvious possibility that fascinated many clever workers and tempted them to give to this branch their untiring efforts. It is not difficult to imagine the great delight which Talbot must have felt when he obtained the results printed in his appendix to Tissandier's *History of Photography*, and in other places.

The application of photography to printing methods was possible along so many lines that it is not to be wondered at that progress was, in a sense, slow. The method of Talbot and the various photogravure processes appeared so simple, that they naturally attracted wide attention. Along with these, was the discovery by Ponton, in 1839, of the photo-sensitive properties of chrome gelatine compounds, giving rise to the charming Collotype process, so beautiful in the laboratory, and so elusive in the shop; then the Woodburytype, the most charming of all the photo-mechanical processes; then the various phases of the swelled gelatine and gelatine wash-out processes, and photolithography. All of these methods seemed more or less simple in their *modus operandi*, but were fraught with serious difficulties in the regular practice of daily work.

The half-tone process as we know it to-

FIVE DOLLARS will be awarded by the editors of AMERICAN AMATEUR PHOTOGRAPHER each month for the best picture submitted. This is done with the idea of encouraging our readers to send some of their best work for reproduction and the Competition pictures are exempt from Portfolio criticism. The editors reserve the right to divide the prize or withhold it altogether if the entries are not of sufficient merit. Use coupon in advertising pages and send pictures marked, "Monthly Competition," to Dr. John Nicol, Tioga Centre, N. Y.

day, the simplest and most practical of all the photo-mechanical printing methods was so involved in conception that it could only be developed in the nature of a growth, but its current practice soon became so certain and uniform and comparatively easy when a thorough basis had been established that effort in other directions was halted.

My own experience and connection with photo-mechanical work dates back to 1875, when having just completed an architectural apprenticeship, I left Detroit to join my elder brother, Louis Edward Levy, in Baltimore. He had just patented the original Levytype process and was attempting to establish a photo-engraving business in that city; my services were required as draftsman to interpret photographs into pen and ink drawings, the commercial application of the process then being limited to the reproduction of subjects in black and white. Shortly after this, in 1887, we removed to Philadelphia, where we continued in the same work.

At the time I speak of, there were, so far as I am aware, only three parties commercially engaged in the work of photo-engraving in America, and each was working along different lines, though all on the basis of chrome-gelatine compounds. These so-called gelatine processes were in use for the production of relief printing plates. The plates produced by these processes had very many unsatisfactory qualities, and the methods themselves were not well calculated to form a basis for work of the character of the modern half-tone plate. While some presentable results were obtained with the aid of these methods, it may be safely stated, that without a radical departure therefrom, the results attained by the half-tone process to-day would have been substantially impossible.

From 1881 to 1885 the method of etching on zinc from an impression obtained directly upon bi-chromatised albumen came into general use, superseding the gelatine process. The facilities afforded by this method of procedure, and the substantial nature of the metal, offered a basis for progress in the direction of producing a serviceable relief plate, having the delicate texture required for a reproduction from nature.

This advance removed a whole range of

serious impediments to the progress of the half-tone process and it was possible to produce a satisfactory plate from any suitably constituted negative. The experience gained in the reproduction of pen drawings and other subjects in black and white had firmly fixed the character of the negative required for the purpose, and everything was in readiness for the development of the modern half-tone process.

The last great difficulty now presented itself in the way of obtaining a suitable ruled screen for the work. To this problem we all addressed ourselves. Meisenbach, in Berlin, was, I believe, the first to appeal to the trade, offering large printed sheets, and also rulings on glass, from which photographic copies were made by the user. Mr. Ives had abandoned his original process, and was using screens which he ruled for himself. Moss, in New York, was ruling his own screens, as indeed were many of the different establishments, and their number had by this time increased to considerable proportions. It is useless to enter too minutely into the various efforts that were made to produce a satisfactory screen.

We had in our establishment a wood engraver's ruling machine, capable of ruling up to 20 by 20 inches, the tool and divisions being worked by hand. From about 1886 I gave myself most assiduously to the work of making a proper ruling for a screen, making rulings on steel and copper plates, from which prints were used to copy, and also attempting rulings on glass. The latter undertaking was one of the most elusive that I have ever experienced. Each fresh attempt would appear to be most promising during the first few inches of the work, and sometimes through half or two-thirds of the plate; then something would arise to vitiate the effort; either the cutting tool would fail to remove the entire ground, or it would strike a flaw in the glass, or some disturbance of the machine would cause an imperfectly spaced line. Whatever it was, something was almost certain to occur in the progress of every plate, so that I took the machine to my home and did all my work at night when everything had quieted down, starting about 9 o'clock, and working through until 5, 6, or 7 in the morning when the traffic of the street commenced its ever-

recurring activity. This was early in the year 1886. A plate 4 by 5 inches that had no flaw in it, or a 6 by 8 inches with only one bad line, or an 8 by 10 inches with one corner failing to cut through the ground, was considered a great accomplishment. Having reached this stage of the work I determined that two things were vitally necessary if a satisfactory screen were to be produced; the one, an automatic machine which could be taken, if necessary, to some quiet spot in the country, and the second, a suitably ground and polished cutting tool of diamond, as all other substances had proven totally inadequate.

To design an automatic machine on the lines of the one which I had was my first task. As a matter of course, the ever-present difficulties with the screw and bad workmanship were encountered. These difficulties by slow and painful efforts were ameliorated, so that about the fall of 1888, I had an automatic machine ready for a belt. Progress on this work was retarded because my brother had, in the meantime, embarked in a newspaper venture to which he was giving nearly all of his time, and the entire conduct of the affairs of the Levytype Company devolved upon me. Having finally obtained a diamond point suitable for the work in hand, this, added to the automatic machine which I had constructed, brought the production of fairly satisfactory rulings of considerable sizes within reach. It was not, however, within *easy* reach; there were still all the difficulties of the glass, and of vibrations to contend with, but still it was possible with sufficient effort, to produce a thoroughly good and serviceable ruling up to 12 by 15 inches, and of the necessary fineness for direct use.

With these rulings at hand my brother was impressed with the idea that if the lines could be etched into the glass and filled with a black pigment, it would produce an ideally perfect screen; he urged this idea persistently in spite of repeated failures. The attempts, however, showed sufficient merit to warrant the further effort, which finally resulted in complete success. I wished then to make the perfection and manufacture of the screen my sole work. Having been in my brother's employ, the machine and experiments had been made

with the time and material for which he had paid. A mutually satisfactory agreement was reached under which I purchased and became the sole owner of the machine and other appliances which I had designed and constructed for the purpose of screen making. This was the end of the experimental stage of this work, but by no means the end of the difficulties to be encountered in producing screens commercially.

The development of the method to its present state of perfection was a long and arduous struggle. In the fall of 1890 I rented a small place on Sixth Street in Philadelphia and erected my machine and started to work, but it was not until some six months later that a commercially satisfactory screen was produced. At this time the single line ruling was still in universal use. Mr. Ives and ourselves, so far as I am aware, were the only persons using the cross-line. The use of this form of screen presented so many advantages, that from the beginning I urged all applicants and inquirers to give themselves to the mastery of the cross-line screen, with the certainty that they would abandon the single line ruling in its favor as soon as they were familiar with its merits.

The trial screens, so called, were introduced with a special view to enabling prospective purchasers to experiment with the cross-line screen at a moderate outlay, and I am satisfied to-day that the listing of these screens although at a loss in actual cost of production, was of very great benefit to the progress of the art, and promoted the rapid introduction of the cross-line screen.

As is well known, the introduction of these screens gave a great impetus to the development of the half-tone process. They were acquired by one establishment after another throughout the world, and for the time being completely halted every effort to produce relief plates direct from nature by any other method. I threw all my energy into finding methods of improving the screens and rendering them as nearly faultless as possible. The study of the underlying optical phenomena was taken up with much interest with a view to establishing the best possible relation between the black and white elements of the screen. Some of the results of these studies were contained

in a paper read before the Photographic Society of Philadelphia in 1896. These studies and experiments tended to establish the equal black and white line as the best proportion, and this conclusion has been confirmed by all subsequent experience.

It is interesting to note that in the early days of the half-tone process, beginning about 1890, the co-ordinate branches of printing, paper and ink making, electrotyping, and the general state of the art, were such, that a screen of 120 lines per inch was nearly as fine a ruling as could be advantageously used for high class work, and 133 lines was considered proper for small and delicate work. With the perfected screen and better plates came better paper, ink, and printing methods, and the tendency toward finer rulings. This has been carried so far that a 220 line ruling is to-day not at all unusual, and screens of 300 and 400 lines to the inch find occasional use.

The demand for finer rulings was based upon the objections to the appearance of half-tone plates that forced themselves on the general attention as the process began to reach its highest development. The years 1896 and subsequent, produced an agitation in favor of something which should be less flat and have a less mechanical texture than was characteristic of the half-tone produced by the cross-line screen. Attention to this problem gave rise to the four-line screen, which showed a distinct advance in the way of rendering more detail and a greater variety of tones, but the mechanical character apparent in the screen was somewhat exaggerated, and this defect, coupled with the very great difficulties attendant on the commercial production of the screen, led me to withdraw it from the market. There are to-day, however, a number of these screens in use, and by their aid results are produced that surpass in many qualities the results from the cross-line screen produced in the same establishments.

The conditions that led to the working out of the four-line screen, led me also to a serious study of a variety of possible methods of producing a printing plate with an irregular grain. The results of these studies and experiments can be summed up in a few words. An irregular grain means, that of the elements of black and

white which form the resulting picture, some are large and some are small, and that they are irregular in form and arrangement. If it were possible to attain such a result, and at the same time have the character, direction, and size of the elements varying in conformity with the character or texture of the subject, the result would unquestionably meet the highest ideals, but such a thing is entirely out of the question. It may be set down as an unquestionable fact that a picture having no visible texture is better than one with any texture that can be conceived of as possible of attainment. The uniformly ruled screen of 175 lines to 200 lines per inch produces a surface which has, to all intents and purposes, no visible texture. If any irregular subdivision is to be had that shall be equally unobtrusive, its smallest subdivision must be at least as small as the elements of the screen with which it is compared. It must also have an irregular surface for printing, that is, a surface in which some of the elements are larger and some smaller, and in which none exceeds the single elements on a 175 or 200 line screen. This would make a printing plate which could certainly not be used in the present state of the art. I therefore long ago came to the conclusion that no irregular grain surface can be produced which will hold its own with a cross-line screen of suitable texture in rendering all classes of subjects, and I am confident that time and experience will confirm this determination.

It is difficult to see, at this time, where, or along what lines, progress in the production of relief plates direct from nature is to be made. Many of the results obtained to-day, which are printed in current magazines and in catalogues for commercial purposes, are so astonishing in brilliancy and perfection, that it is difficult to see how more could be desired, or if desired, how attained.

The Chairman said they were much indebted to Mr. Max Levy for sending them such an interesting paper. His name and those of others mentioned were well known to process workers and there was very little doubt that a great deal of excellence of present half-tone work was due

to Mr. Max Levy's indefatigable labor and care in working out the problems connected with the preparation and working of cross-lined screens. The idea of breaking up photographic half-tone gradation by some kind of mechanical ruling or grain was a very old one. Fizeau, in 1842, seems to have been the first to apply it in etching Daguerreotype plates, using an aqua tinta grain to increase the resistance of the plate to acids and give a tooth to hold the ink. Fox Talbot also found the necessity of it in his photographic veil, composed of two or more thicknesses of crape or gauze, but afterwards he adopted an aqua tinta grain. The first to make use of crossed rulings to form a grain was Berchtold in 1859, and it is interesting to note that his method was somewhat analogous to Meisenbach's, in that he used a single line screen of parallel spaces and lines, crossing it once or several times as needed to produce the desired effect—but the ruling was applied directly to the print on metal. J. W. Swan was one of the first to use a cross-line screen for photo-engraving; he recollected seeing a print, at Newcastle in 1867, bearing a grain of this kind; a similar method was under experiment about the same time in Berlin, and Orivet of Paris was making some very successful photo-engravings with a similar grain, but in all these cases the coarseness and uniform regularity of the grain was a drawback. Later, in 1879, Mr. Woodbury had shown him some very excellent half-tone block prints produced with a screen made by photographic reductions of net or gauze, and the Woodbury patent of 1873, embodying the use of such a screen for producing half-tone photographic blocks, may perhaps be taken as the starting point of this kind of work. An early block of Woodbury's on this system, printed in Vidal's *Photogravure*, will compare well with modern work. In 1882 Meisenbach brought forward his method of using a single line screen which was turned round during the exposure so as to cross the lines at a right angle. This appears to have been a very great advance on anything that had gone before and soon came into general use. In 1889, when in Munich, Mr. Meisenbach had shown him the mother screen ruled diagonally in single lines and about

30 inches square, from which others were reproduced by photography. Shortly afterwards Mr. Turcke, of Donauwerth, was selling sheets of very carefully printed rulings from which screens could be prepared as desired, and an explanatory pamphlet was sent out with them. He had tried screens made from these sheets in the office in Calcutta, and found them useful until the advent of the Levy and Woulffe screens, which were very much more perfect. The defect of the early cross line methods was that the screens were applied in contact with the subject to be reproduced, and thus there was no diffusion or diffraction effect, which, as Mr. Max Levy himself had pointed out, was such a marked feature in the use of cross lined screens as now applied at certain short distance in front of the sensitive plate and with special diaphragms. There was no doubt that Mr. Max Levy's work had brought about very great improvements in half-tone typographic work, and it was wonderful that he had been able to work such fine rulings successfully. He recollected the discussion that took place when Mr. Johnson brought his 400 line screen before the Society as to the almost impossibility of printing blocks from such fine rulings, chiefly on account of the imperfections of paper and ink, but now they were not uncommon for high class work. He had lately seen in New York some very beautiful prints done with a 400-line screen. With such a fine grain the photographic gradation of the image was very perfectly rendered, it was more continuous and was not at all screeny, in fact on some of the latest prints of the kind there is little more grain than on a good collotype print. As Mr. Max Levy had said, the present methods were a great improvement upon the earlier ones, and what was impossible a few years ago, was in ordinary use nowadays. With regard to the question of irregular grain screens, he thought Mr. Levy was right. It was exceedingly difficult to get an irregular grain which would produce proper gradation and relief in the image, and it was impossible to regulate the diffraction effect as was quite feasible with cross lined screens. The image was either too much broken up, and rough or spotty, or was

covered with an even tint in the lights which was ruinous to effect. The best results of this kind could perhaps be obtained by a reversal of the ordinary photogravure process so as to produce a relief block with a fine dust grain. The account of Mr. Max

Levy's work and progress with his screens, was an exceedingly interesting one, and he was sorry there were not more process-workers present to discuss it.—Reproduced from the Society's organ, *The Photographic Journal*.

HOW A PHOTOGRAPH MAY TELL ITS OWN AGE.

The following interesting combination of mathematics and photography, which, through the courtesy of *The Scientific American*, we are able to reproduce; may, by some of the more practical of our readers, be met with the *cui bono?* query; but the old saying, "Keep a thing seven years and you will find a use for it," is applicable to facts as well as to things, and no great stretch of the imagination is required to suppose a case in which Professor Rigge's ingenious method may untangle a knotty point.

The title of the article is "When Was This Photograph Taken"? and is as follows:

I wonder what the reader will say when I show him this photograph of the Creighton University Observatory (at Omaha, Neb.) and ask him to tell me when the photograph was taken. I will allow him every liberty but one—he must not ask the photographer.

The condition is rather severe, but not worse than my own, because I do not know the photographer, nor could I after diligent inquiry find anyone who knew anything at all about the picture.

I am very fond of mathematics. It seems to run in my blood. I looked upon this picture for years, and was convinced that the shadows in it had automatically and unmistakably stamped the date and time of its taking upon the photograph. I investigated, I measured, I computed. And now I know when the photograph was taken. If the reader is willing, I will take him into my confidence, and show him how the problem was solved. I will investigate three things: 1, whether it is possible in principle to obtain the date of a photograph from the shadows in it; 2,

whether it is possible in practice; and 3, how closely our results are to be trusted.

The direction in which the shadow of an object is cast evidently depends upon the sun's position in the sky, and ought therefore to serve as a means to obtain this position. Now, the twofold motion of the sun is causing it continually to change its position; the diurnal motion is carrying it about in a circle whose center is at the celestial pole, the annual one is carrying it toward or away from the celestial equator. As these two motions are independent of one another, every determination of the sun's position by means of a shadow it casts ought to give us its place in both of these orbits, that is, give us the time of the day and the day of the year. Fig. 2 will show us how this is done.

Let us imagine the heavy line AB to be the shadow cast upon a horizontal surface by the vertical rod OB. With the radius AO let us describe a miniature celestial sphere about the point A as a center. Let NESW be the great circle of the horizon with its cardinal points, and NPZS that of the meridian. Z, vertically over A, will be the zenith, O will be the sun's position, and P, so taken that the angle NAP is equal to the latitude of the place, will be the celestial pole. The points Z, P, O—zenith, pole, sun—are the vertices of the great astronomical triangle with which we must become acquainted. The side PZ is the complement of the arc NP, which is equal to the latitude of the place. The side PO is the sun's polar distance, and is the complement of its declination, or of its distance from the celestial equator. The side ZO is the sun's zenith distance and the complement of its altitude OH or of the angle OAH. The angle at the pole,

ZPO, is called the sun's hour angle, and is proportionate to the time elapsed since the sun crossed the meridian. The angle at Z, PZO, or its equal NAH, is the sun's azimuth, or bearing, as a surveyor would call it, reckoned from the north point of the horizon. The angle at O, POZ, is called the parallactic angle. We have no

the angle ZPO and the side PO. It does so indirectly. Spherical trigonometry teaches us that if any three of the six parts (three sides and three angles) of a triangle are given, the other three are thereby implicitly and definitely determined and can be found by computation. Now we have three such parts given in the triangle

Courtesy of Scientific American
 CREIGHTON UNIVERSITY OBSERVATORY, OMAHA, NEB.
 When was this photograph taken?

Fig. 1

need of it in our discussion. In this triangle the hour angle ZPO determines the sun's position in its diurnal orbit and gives us the time of day; the side PO, the complement of the sun's declination, determines the sun's position in its annual orbit and gives us the day of the year. The measurement of the shadow AB of the rod OB must, therefore, in some way give us

PZO. The first is the side PZ, the complement of the latitude of the place where the shadow is cast. The second is the angle PZO, the sun's north azimuth, the supplement of its south azimuth OZS or HAS or BAD. This latter angle BAD is determined in the right plane triangle BAD by the sides BD and AD (or CB), the distances which the shadow falls east (or

west) and north (or south). And finally the third part is the side ZO, the complement of OH, or of the angle OAH or OAB the sun's altitude, this latter angle being found in the right plane triangle OAB by the sides OB and AB. Hence a measurement of the position of a shadow with respect to the object that casts it, that is, of the distances BD, east or west, BC, north or south, and BO, downward, or of its three space co-ordinates, as a mathematician would name them, will furnish us with all the data necessary and will determine the day of the year no less than the time of the day when the shadow occupied that particular position. It is evident that the object casting the shadow need not be a vertical rod, nor that the shadow should fall upon a horizontal plane. All we need absolutely is the direction in space of the line joining the shadow and the object, that is, technically, its altitude and azimuth, these data being best determined in practice by means of the three space co-ordinates, measured by a plumbline, level, compass, tape line or similar instruments.

We come now to the second and practical part of the problem, the actual measurement of the three co-ordinates, BD, BC and BO. And here we are at once confronted by two difficulties. The first and greatest of these lies in the identification, or rather in the determination of the exact location of the shadow of a known point upon a photograph. In our reproduction of the photograph of the Creighton Observatory it will be seen that the stone coping on the west side of the meridian slit in the transit room casts its shadow very conspicuously on the window casing. The shadow falls exactly upon the middle of the flat western side of the casing and on a level with the mortar line between the tenth and eleventh bricks below the coping stone. This casing is in reality two and a half inches wide, but upon the original photograph it is only 12 thousandths of an inch. An error of one thousandth of an inch in the localization of the shadow upon the photograph would make the result uncertain by a day. The second difficulty is a minor one, and lies in the prac-

tical measurement of the three co-ordinates. This measurement is, of course, executed upon the object itself from the information obtained from the photograph. It was found that the shadow fell 31.35 inches downward, 27.70 inches eastward and 12.25 inches northward. These data coupled with the latitude of the place, 41

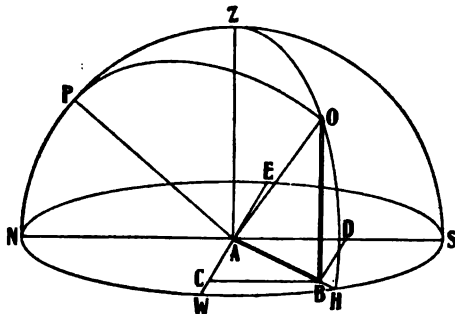


Fig. 2.

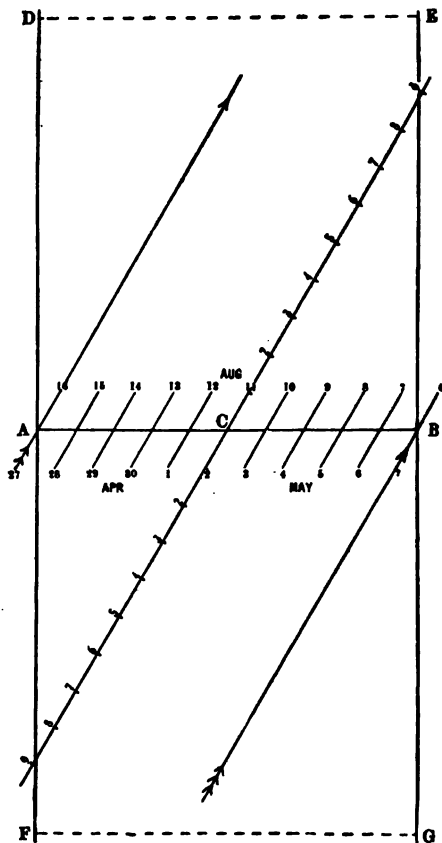


Fig. 3.

deg. 16 min. 6 sec., tell us by computation that the sun's declination was 15 deg. 15 min. north and the hour angle 41 deg. 12 min. or 2 hours 45 minutes afternoon, local apparent solar time. Reference to any large and good celestial or terrestrial globe, to the Nautical Almanac, or to similar sources, shows that the sun has the declination +15 deg. 15 min. on May 2 and August 11, that is, on two dates, at one of which the sun is going north and at the other going south. In order to determine which of these two dates is the correct one, we must resort to evidence other than that furnished by shadows. In our case we see upon a close examination of the original photograph that the condition of the grass in the foreground and of the trees in the background is such as to point unmistakably to the earlier date, that is, to May 2. Now, as the sun is 3 minutes fast on May 2, and as Omaha clocks are set 24 minutes fast in order to show central time, this gives us May 2, 3.06 P. M., central standard time, as the date and time when the photograph was taken.

In order to confirm our result, let us turn to Fig. 3, which represents a part of the window casing drawn to actual size, two and a half inches wide. The line AB is on a level with the mortar line between the tenth and eleventh bricks, and DE and FG are on a level with the next mortar lines above and below AB. C is the location of the shadow, as shown on the photograph. The long oblique line passing through C shows the path of the shadow on the casing on May 2 and August 11, and the position of the shadow at intervals of one minute before and after its passage through the critical point C. The other two long oblique lines show the path of the shadow five days before and after, and the short lines show it for every day. After making due allowance for the practical difficulties of the problem, is it claiming too much to assert that in this case the date is correct within two or three days, and the time within as many minutes? If the shadow had fallen as many feet as it did inches away from its object, would not the very day and the minute be fixed? I dare say, however, that in spite of all

this evidence most of my readers would rely more upon the word of the photographer or upon actual observation than upon all the mathematics in the world. To quiet their apprehensions, let me say that on last May 2 (1904) at 3.06 P. M., central time, the shadow was at the place assigned as accurately as anybody could desire. I will also add that I had finished the computation, and proposed the problem to my students two months before.

A half-tone of this photograph of the Observatory appeared in the Creighton University catalogue in June, 1894; hence it must have been taken at the latest in May of that year. As it was evidently taken in the sunlight, perhaps the weather conditions may decide the year. The cumulous clouds in the sky, the northwest wind indicated by the weather vane, and the transparency of the air, which on the original photograph allows trees about three miles away and bluffs about six miles away to be seen with great distinctness, show that there must have been a rain a short time before to clear the atmosphere, the wind must have continued to blow from the northwest for many hours and the barometer must have been high. Prof. L. A. Welsh, our local weather forecaster, has very kindly examined his records and they, together with those kept at our Observatory, prove beyond the possibility of a doubt that May 2, 1893, is the day we are looking for. Not only do the weather conditions shown on the photograph apply to that date in all their completeness, but they also single it out most emphatically from the preceding and following days of the year. And more than that, they also determine the year, because they cannot be made to apply to May 2 or contiguous days in 1894, 1892, 1891 and 1890, and further back than that I need not go for reasons that would not interest the reader.

If, therefore, I am asked when this photograph of the Creighton University Observatory was taken, I can answer with an assurance of an accuracy superior to that of the photographer himself if he could now be found and interrogated: Tuesday, May 2, 1893, at 3.06 P. M.

SOCIETY NEWS.

Secretaries of Societies, or Camera Clubs who want their meetings reported or who have communications of interest to photographers that they wish to have published should send them direct to Dr. John Nicol, Tioga Centre, N. Y.

The Camera Club of New York.

The regular monthly meeting of the club was held at the rooms, No. 5 West 31st street, New York, on Tuesday evening, March 14th. President Fred E. Ives presided. No business was done. President Ives showed a home-made spectroscope devised by a friend of his, which for materials cost but five dollars, and yet gave practical readings as good as any expensive instrument costing ten times as much. In some second-hand shop an old brass stand was picked up, having three adjusting screws in the base. On the top was secured a horizontal circular board about 14 inches in diameter and half an inch thick which had been planed and varnished.

Two cheap microscopes were mounted radically on this board one stationary and the other on a sliding support pivoted at the center of the circular board, so that the objective end of the instrument could face at an angle or opposite the objective end of the stationary microscope. The spectroscope grating was second to the eye-piece of the latter instrument. The object for examination is placed in a carrier at the objective end. The diffracted light in passing through the grating produced the spectrum in the object which is observed by looking through the eye-piece of the movable instrument adjusting it horizontally to the proper angle until the best effect is noticed.

A scale can be marked off on the periphery of the circular board to determine the angle for observing different spectrums of different subjects.

On Friday evening, March 17th, Mr. Dunn of "Collier's Weekly," gave an interesting talk on "First in Korea," illustrated by many slides from negatives he made showing the first naval engagement of the Russian-Japanese War, including the sinking of the Russian battleship "Variag" and the gunboat "Koriets" and the Japanese

invasion of Korea. The scenes depicted were of much interest, particularly the army on the march over ice-bound rivers and barren mountains many of which were secured by a telephoto lens unobserved some distance away. Mr. Dunn developed many of his films by the use of the Kodak Developing Machine.

On arriving in Korea a day or two before the beginning of the war he secured possession of all the photographic supplies in the city and thus disappointed the official Japanese photographer who had counted on obtaining plates, etc., on his arrival from Japan. The rooms of the club were crowded to their fullest extent by a large and appreciative audience.

On the evening of March 15th, the Interchange set of slides of the Portland (Me.) Camera Club, and the Photographic Society of Philadelphia and the Photographic Section of the Hartford (Conn.) club were shown.

The club auction sale of old photographic goods, etc., on March 9th resulted very favorably for the club. It was a rainy night, but there was a good attendance. Fine well-known cameras sold low and ordinary apparatus brought prices beyond the owners' expectations.

The annual members Print Exhibition begins on April 1st, the date of closing of entries was March 25th.

The annual meeting of the club occurs on April 11th.

The Federation of American Photographic Societies.

A special meeting of the Federation representatives was called and held on March 22d, in this city, at the rooms of the Metropolitan Camera Club, 101st street. It was presided over by Curtis Bell, the President. There were present representatives of the Toronto (Can.) Camera Club, the Pittsburg (Pa.) Photographic Society, the

Brooklyn (N. Y.) Camera Club, the Capital Camera Club of Washington, D. C., the Columbia Photographic Society of Philadelphia. The Pictorial Club of Philadelphia and the Salon Club of America, in addition to representatives of the Metropolitan Camera Club. Reports of the success of the First American Salon in New York, Washington, and Pittsburg where it had been exhibited, were very encouraging, the exhibitors had received much praise from the local press and the attendance was large. President Bell reported the need of some plan of preliminary selection since it would be impossible to secure an artist jury willing to consider an unusual number of prints. It was finally decided that there should be appointed by the President a preliminary jury of artists and photographers and in different sections of the country sub-preliminary juries or agents. Intending exhibitors to the next Salon will first submit their work to the local agent in their section of the country who will give advice as to the pictures that are technically good and what should be left out. The exhibitor will then frame such as are desirable and forward the same to the Salon representative in New York. He will submit the pictures to the Preliminary New York Jury and the pictures so selected will be later submitted to the final jury. The intention is that not more than six hundred prints will be submitted to the final jury.

It has also been made a rule that only prints of recent work and not previously exhibited elsewhere shall be eligible for exhibition at the second American Salon, to be held in December, 1905.

The Treasurer, Mr. John H. Thurston, reported that over four hundred dollars had been received since last June and a trifle over three hundred dollars had been expended. A balance of something over a \$100 was in the Treasury.

The matter of historical photographs and their preservation was reported upon at length by Mr. Zimmerman, Vice-President. He informed the meeting that the Franklin Institute of Philadelphia would act as the representative of the Federation in tabulating and preserving Photographs of

historical interest and would co-operate in their collection and selection. It was believed by Mr. Chas. E. Fairman, of Washington, that after awhile the Congressional Library at Washington, would ultimately take up this branch of work, if appropriations could be obtained through Congress.

President Bell stated that Mr. H. Snowden Ward of the "Photogram," had consented to represent the Federation in England, and would receive exhibitions there for transmission to the next American Salon. He also had the consent of one or two others in Austria and Italy. The plan is only to forward exhibits of the highest quality.

It was voted to have the Federation incorporated under the Laws of the State of New York. The session lasted till midnight.

Toledo Camera Club.

The second monthly competition of the year of the Toledo Camera Club was held Wednesday evening, March 8, 1905, at the Museum of Art. There were a number of entries and the pictures shown were excellent, the exhibition as a whole being considered the best ever shown. There has been a marked improvement in the work of the members of the club, and a vast difference was noted between pictures of a year ago and those of the last exhibit. A special contest was held on snow path studies. First prize in this contest was awarded to Cady Markley. A special contest was announced for April on the subject of "Winter Creeks," and for May, "Active Street Scenes." The judges of these contests are Thos. B. Parkhurst, artist, Geo. B. Sperry, photographer, and C. C. Oswald, photographer. At this meeting announcement was made of a lecture to be given at the Museum of Art Tuesday evening, March 28, by Charles Barr, professor of biology at Albion College, Albion, Mich. Prof. Barr is also an instructor in advanced photography. Members of the camera club were given permission to bring a friend and the members of the Museum of Art were invited to attend the lecture. Prof. Barr will answer

all questions submitted on the subject of photography if mailed to him before the date of the lecture.

The club which is now starting on its second year has a membership of seventy, and meets the second Wednesday of each month except July and August. The officers are: Geo. W. Beatty, Pres.; John F. Jones, Vice-Pres.; J. T. Dempsey, Treas.; L. B. Busse, Secy.

J. F. Dempsey, Geo. W. Stevens and Miss Grace Carter, Committee on Membership.

The question of affiliation of the Toledo Camera Club with the American Lantern

Slide Interchange was discussed and a permanent committee was appointed to make the necessary arrangements for affiliating with the Interchange and to take charge of the Lantern Slides submitted by the members.

Committee, Geo. W. Stevens, John F. Jones, Louis B. Busse.

Cady Markley, C. L. Lewis and Miss Cordelia O. Hopkins, Committee on Exhibition.

JOHN F. JONES

834 Ash St.,

Toledo,

Ohio.

OUR TABLE.

Books for review and apparatus and material for examination and report to be sent to Dr. John Nicol, Tioga Centre, N. Y.

THE SCREEN FOCUS KODAK dispels the only objection that has heretofore been raised against daylight film and with the tourist or serious photographer this latest output from the Kodak factory should be indeed popular as it combines all the advantages of a plate camera with lightness and portability; not to speak of the non-halation and ortho-chromatic qualities and other advantages of roll film.

* * *

THE CENTURY CAMERA COMPANY's catalogue for 1905 has made its appearance, too late for us to notice any of the improvements or innovations in their line of cameras. Suffice it to say that within a striking and original cover will be found full description of all that is good and desirable in hand and tripod cameras. Century quality is now understood wherever Century cameras are known and that is the world over. Those contemplating a new outfit may have a copy of the catalogue for the asking from their dealer or from the Century Camera Co., Rochester, N. Y.

* * *

THE LUMIERE COMPANY, whose products are so well and favorably known on the other side of the Atlantic, have been operating their factory at Burlington, Vt., for some time and their plates are now on the American market. We have plate makers

in this country whose products are equal to every emergency and only a concern which felt certain of being able to offer something better would dare to enter the lists. We have received samples of the Lumiere plates of various grades and will tell all about their qualities and claims to superiority in our next.

* * *

With the Camera, the monthly circular of the Illinois College of Photography, comes full of news of even more than usual interest, the students having established a journal to be "edited, managed, illustrated, read and criticised by themselves." We gladly give it the right-hand of fellowship and hope to see it occasionally. The doings of the month included a reception and competition given by Class A in honor of the graduating class of last month, the prize being awarded to Harry Hiatt, the competing pictures being of very considerable merit, the proceedings including a debate on a question that should have no place in a profession that hopes to deserve uplifting, the "Open on Sunday." We regret to hear that "iniquity triumphed," but pleased to know that the result was due to the oratory more than the logic.

The photo-engraving students have established a club for themselves, with rooms fitted for all kinds of their work, as well as

for social entertainment; and not the least encouraging part of the circular is the applications of former students now in business for assistants and the accounts of the success of others who have from time to time graduated from the College.

Colorprinte.

Photography in all the colors of nature has been accomplished, as all will admit who have had the opportunity of admiring the work of Frederick E. Ives and his wonderful kromskop; but the taking and viewing apparatus is expensive and beyond the reach of the multitude. We therefore welcome any new process which brings us nearer to color photography, and such a one is Colorprinte, a paper for making photographic prints in the colors of nature from ordinary landscape negatives.

Colorprinte is the invention of Dr. von Slavick, an Austrian army officer, perfected by Dr. Adolf Hesekei. It consists of a paper coated with successive layers of colors in the order of the usual relative density of those colors on the negative. When printed that portion of the coated pigment which has not been acted on by the light is washed away in warm water which completes the print. The theory is that light passing through the negative reaches through the sensitized layers of pigment to the color representing the original color of the subject. In the high lights, such as the sky, the negative being dense only such light will pass through as will reach the first coating which is light blue. On the contrary in the darker portions, such as foliage, those portions of the negative being more transparent the light reaches through the successive layers to the green which is next to the last coating.

As will be seen the working of the paper is of the utmost simplicity. In the form in which it is being placed on the market it consists of an ordinary looking piece of pigment paper which is sensitized by being placed for three minutes in an ordinary 2 1-2 per cent. bichromate bath or, preferably, in the sensitizing solution which is furnished by the manufacturers in concentrated form. It is then squeezed to a ferrotype plate and placed in a dark place to dry. If this sensi-

tizing is done in the evening the paper will be dry and ready for use the following morning. When dry it is sensitive to light in about the same proportion as ordinary gelatine paper so that it can be handled with impunity in ordinary subdued light. As there is no perceptible change during printing that is best accomplished by exposing a small strip of gelatine paper on one edge of the negative along side the Colorprinte. When the gelatine paper has printed to the depth usually required for a good proof the printing is complete. The Colorprinte is then placed in a tray of cold water, allowed to soak for a moment and a piece of transfer paper (which is furnished with the Colorprinte in each package) placed under it and both removed from the water and squeezed together. It is left for a few minutes and is then placed in warm water—about 95 degrees—though a thermometer is unnecessary because a difference of several degrees will make no difference in the print. In a few moments some of the red protective coating will be seen to ooze out between the Colorprinte and the transfer. The original paper of the Colorprinte can soon be removed and the print will have the appearance of a mass of dark red. It is then turned face down in the warm water when that portion of the pigment which is not affected by the light will dissolve and fall to the bottom of the tray. It can be turned face up and examined from time to time to ascertain when development is complete. Development usually takes about 5 minutes though it can be hastened by slightly warmer or retarded by colder water. There is a great latitude of exposure as if under exposed colder water may be used and warmer if over exposed. As development progresses the operator will be pleasantly surprised by the appearance of one color after another as the warm water reaches to and dissolves the unexpected pigment above each color. When development is completed the print is thrown in cold water or a weak alum solution to stop further development and is then mounted or hung up to dry to be mounted later.

No special negatives are required but good ordinary contrasty negatives will give

a correct interpretation of the original colors of the view. The Colorprint now being placed on the market is for general landscape negatives. Owing to the fact that many of the shades of red and green photograph with practically the same density on the negative, special paper for portrait work is required, which it is hoped will be on the market in the near future.

Recognition.

The following, which we clip from *Down-Town Topics*, should set at rest any doubt as to the fact that not only does the inward man stamp itself on that which is outward, but that the two together, making what is understood by individuality, can, when possessed of the true artistic instinct, stamp itself on its product of the brush or the camera; and that too in such a way as to be recognized by other artists.

J. Craig Annan, of Scotland, an illustrated article on whose work appears in the current issue of "Camera Work," is the leading English pictorial photographer and the real leader of the pictorial movement in England. He was one of the International Commissioners to the St. Louis Exposition. During his brief stay in New York, in passing through on his way to St. Louis in the latter part of August, Mr. Annan made the acquaintance of Mr. Keiley, the author of the above article in "Camera Work," in a manner sufficiently unique to warrant our asking Mr. Keiley to prepare an account thereof for "Down Town Topics."

At the time, Mr. Keiley, who had already begun his sketch of Mr. Annan, had never met Mr. Annan, having formed an estimate of him solely through his work and writings.

EDITORS OF DOWN TOWN TOPICS.

Pen Picture of J. Craig Annan.

To the Editors of *Down Town Topics*:

GENTLEMEN: In response to your request that I set down for your bright little publication an account of the meeting of Mr. Annan and myself, referred to in

a recent conversation, it gives me pleasure to do so on your assurance that it will be of interest to your readers.

I had already formed my estimate of and prepared the outline of my article on Mr. Annan for "Camera Work." It rarely happens that our pre-conceived ideas of a person whom we have never met, and whom we have come to know only through common interests or by reputation, are confirmed when we meet personally the subject of our impersonal consideration. Indeed, the contrary is usually the case, and as a rule, the more favorable the pre-conceived impression, the ruder is the shock of disappointment. All too often we find that the person under consideration does not measure up to the standard our imagination has set—that previous ignorance of personality has kept out of the picture personal eccentricities or shortcomings—that materially mar and change the impersonal conception. When, therefore, it is our good fortune to meet with one whom we have for some years known by reputation and of whom, from whose work and utterances we have formed a high ideal, who measures up to and even surpasses the picture that, in our imagination we have painted, it is a source of peculiarly gratifying pleasure. For many years I had known of J. Craig Annan, had admired his work and come to esteem him highly from what I knew of him through that work, without ever having met him.

One evening in the latter part of August, I had gone to Chinatown for the purpose of selecting from the exquisite bits of Oriental art-ware there to be found—a wedding gift for a friend—had made my purchase and was waiting for the same to be wrapped by the Chinese salesman, when my attention was attracted by the rich, low reverberations of a trinity of *Chapeaux-Chinoises-gongs* hanging from the ceiling of the shop. He who had called forth the tinnabulations of their chorus-sing voices, stood before them, knocker in hand, listening intently and critically to their fine metallic melody, as though loth to lose the slightest curve of their graceful rhythmic sound-waves, a gentleman in rough gray travelling suit and panama

hat, a man some few years my senior, who instantly intensely interested me, so much so that I could not take my eyes from his face, while within me arose the conviction that somehow I knew him, though I was just as positive that never before had I seen him. It seemed absurd! Impossible! and yet I could not put aside the conviction. The man before me more than filled a niche that I had constructed within my inner consciousness on very definite lines; corresponded in likeness wonderfully, measured-up-to fully, the portrait of some one that in my imagination I had painted. He was tall, with a lithe, well-proportioned figure. His smooth shaven, rather long face, was firmly moulded in fine, strong, sensitive lines. The eyes were rather full and of the calm, quiet, observant sort, full of intelligence and decision. The firm, yet flexible mouth, was peculiarly sensitive and expressive; and the hand that had struck the gongs, in shape and poise clearly bespoke the artist—where had I known him? Yes—just what I had imagined, Craig Annan—but that was not possible! I had no idea that Craig Annan was in the country at the time, supposing him to be in Glasgow. I had in the past seen several photographs of him, none of them particularly like the man at whom I looked, yet, nevertheless, for some unaccountable reason, and though it seemed to me the most improbable thing in the world, I felt convinced from the first that it was Craig Annan. Amused at myself for entertaining an idea that seemed so remotely removed from the possible, and the chances being one to a thousand against Mr. Annan's being in that part of the world at the time, and even if he were there, of me recognizing him—nevertheless, determined not to let that one chance slip, walking up to where he stood, I held out my hand and called him by name—and it *was* Craig Annan. With cordial good wishes to yourselves, and "Down Town Topics" and its readers for a Merry Christmas and prosperous New Year.

Yours sincerely,

JOSEPH T. KEILEY.

Nov. 13, 1904.

Death of C. S. Abbott.

Charles S. Abbott, president of the American Aristotype Company, and vice-president of the Eastman Kodak Company, died very suddenly at midnight, March 2nd, while staying at Oak Lodge, a country residence thirteen miles from Enfield, North Carolina.

Charles Stuart Abbott was born in Panama, Chautauqua County, December 11, 1858, and was the son of Edwin E. and Mary Abbott. When but sixteen months old, his parents removed to New York, and he there spent his boyhood, obtaining his education in the public schools of the metropolis and at Flushing, Long Island. He was preparing to enter Columbia University when his father's financial reverses compelled the abandonment of the plan. From this time on, the lad had his own way to make in the world, and he accomplished much by his perseverance and tact in dealing with the people among whom he was thrown.

At one time Mr. Abbott studied law in Warren, Pa., and later engaged with Coleman E. Bishop in the publication of the *Countryside*, a weekly paper devoted to the farming and educational interests of Chautauqua County. Mr. Bishop was the editor and Mr. Abbott the business manager of this publication, which was one of merit, but not of financial success.

The business career of Mr. Abbott may be said to date from 1889, when he engaged in the manufacture of photographic paper with Hon. Porter Sheldon. They formed the American Aristotype Company, of which Mr. Sheldon was president and Mr. Abbott was secretary and treasurer. This business rapidly developed into one of the leading photographic concerns of the country and became one of Jamestown's principal industries. In 1899, the General Aristotype Company was formed, including a number of other concerns manufacturing similar lines of goods, which was afterwards consolidated in the Eastman Kodak Company. Of this great concern, Mr. Abbott became vice-president, and devoted two years to its European affairs. He was also president of the Seed Dry Plate Company, of St.

Louis, and a director of the Chautauqua County Trust Company. As a business man Mr. Abbott achieved marked prominence, and was very successful in promoting the interests of his company.

Mr. Abbott was married on February 4,

1880, to Miss Pauline Allen. He leaves a daughter, Miss Marguerite Abbott, and a little son, Charles S. Abbott, Jr. His mother, Mrs. E. E. Abbott, a member of his household, also survives to mourn the death of a devoted son.

OUR PORTFOLIO.

Prints for criticism; only one at a time and only once each month; to be sent to Dr. John Nicol, Tioga Centre, N. Y. The coupon found in our advertising pages must be attached to the back of each print.

1917. F. MILLER.—"Louisiana Swamps in February," although, as you say, a record of fact, is something more, a record with suggestion of more than is seen; and had you stopped the development of the negative a little sooner it would have been still better. In technique it leaves little to be desired, but we should have preferred a little more of the matter on the right with a corresponding reduction of that on the left. That, however, is a matter of taste to which we attach little importance; and quite understand that as the home of the robin and of the other feathery friends you mention, the feelings and suggestions to which it gives rise.

When you say that we condemn the record or "matter of fact" photographs you show that if a constant you are not a careful reader of the magazine, as we have again and again said that it is, if possible, more important than the pictorial; certainly more important for some purposes, and gives pleasure to a great number. To enjoy to the full pictorial photography into which the artist has infused his own individuality is reserved to the cultured few, while the pleasure derived from a thoroughly good record or reproduction of nature is the heritage of the many.

1918. J. S. MOUNTAIN.—"Cliff Dweller Ruins." Here is a case in which the "record" was especially desirable as well as the best of technique, and unfortunately we have got neither as good as they might have been. The "Dwellings" are relegated to the extreme foreground, unimportant matter where they should have been, and in the

distance a line of vegetation that may be trees although they are more like bushes; and unfortunately are sharper than the cliffs themselves. And to crown the whole, the exposure has been so short and the development so long that everything on which direct light has been is as white as paper and everything else perfectly black.

We thus find faults that you may, when opportunity offers, do better. That you take care to place the important objects in the proper place, and that you expose long enough to give everything in something like its true values, that the lights and shades retain something like their true relation. The photograph, as it is, is extremely interesting, and would have been very much more so had it been as we suggest, and as you will make it if ever you shall again have the opportunity.

1919. (REV.) SIDNEY S. CONGER.—"After the Storm Passes" tells its tale in an impressive way, especially in the broken masses of clouds showing "the sunshine after the rain;" although neither water nor sky give quite the "storm" feeling. We see in it rather the heavy downpour that suddenly comes and as suddenly goes, darkening the sky for a time, only to be relieved by a burst of sunshine which here is just about to come. We like the little picture very much, and think we should have liked it better just a shade lighter.

1920. T. J. MORGAN.—"The Silent Shadows." We cannot make anything of this. It seems a fine subject but so much under exposed and under developed that only after close inspection can we discover its

nature; but we see enough to know that with proper exposure and right development it could have been a pretty little picture.

1921. C. A. CAMPBELL.—"After the Flood" is also a puzzle. A foreground occupying nearly the half of the print all broken up into irregular forms that may be ice or indeed anything else closely packed together, surmounted by an attractive arrangement of wood and water, a picturesque arrangement that without the puzzling foreground might have made a good picture, but which, as it is, is not made the most of. The

famous Carnegie Art and other galleries; but the iron and other industries that have created all these.

And we think they are suggested in the right way. Not in the strong light of day when the gigantic aggregation of buildings, factory, foundry, or whatever name they may go by, that have been selected as a type, would have been shown in detail, but in black outline relieved by the spurts of escaping steam; thereby indicating that the work, or the spirit of Pittsburgh is alive both night and day. It is a good idea well carried out, the only improvement to which

No. 1917

LOUISIANA SWAMPS IN FEBRUARY

F. Miller

photography, however, is very good, and with careful selection you should do very good work. Probably, if we knew it, the matter in the foreground is the debris of the flood, but it, to us, at least, conveys no such idea.

1922. CHARLES W. DAVIS.—"Pittsburgh," if we read it aright, is not intended to represent the city so named, but its spirit,—what it stands for,—the idea that comes into the mind of the average man at the mention of the name. It has nothing to do with the busy streets, the many churches and aristocratic homes; not even with the

we can suggest is the toning down of the sky a little so as to give it still more the feeling of night.

1923. R. D. BRUCE.—"The Street Midwinter" is altogether beyond us. A sheet of white paper with only a faint indication of buildings on the right and probably a fence on the left, and nothing else, all being as white as when the paper left the mill. We give it up.

1924. H. W. SCHONEWOLF.—"A November Day," a corn field with a few shocks standing under a thoroughly characteristic November sky, is a pretty hackneyed subject,

No. 1919

AFTER THE STORM PASSES

Sidney S. Conger

No. 1922

PITTSBURGH

Chas. W. Davis

No. 1924

A NOVEMBER DAY

H. W. Schonewolf

No. 1925

SUNDAY MORNING

W. H. Luckhaupt

but never have we seen it better represented, or a representation that better suggested the conditions and the time. It is a pity that you could not have caught a few men and women at the husking, although that is not now done much in the field, and as it is, you have a good picture of, to the farmer, an interesting time. It is comforting, at this time of short exposure, to find a picture of which the exposure has been something like sufficient, and especially with such a good and suitable sky.

1925. W. H. LUCKHAUPT.—“Sunday Morning,” the farmer watering his horse at a draw-well, is one of the best bits of composition that we have seen for a long time, and it is so good in almost every respect that it only makes us feel angry that it is not better. A little longer exposure would have made it perfect, and a negative so suitable for enlargement that it would have almost been a sin not to have enlarged it. Horse, man, and their surroundings are all so perfect that we feel it something like a shame that the sky and the ground and other lighted parts are all so white from overdevelopment, the result of an exposure too short to get a trace of detail without it. In spite of that, however, we like it and like it very much, and every time we go to it we like it better than before, and therefore we urge you who can do so well, to

not let the lack of suitable exposure mar such good work.

1926. (Mrs.) J. R. LARAH.—“Sea-Horses” is a very fine bit of marine work, and for once, properly exposed. The white foam, the breakers, and the rocks, all in perfectly true values is something so rare that we had almost given up hope of again seeing it. But here it is caught just at the right moment and getting just the right time, so that we congratulate you on having the best marine picture of the season.

1927. A. H. DODGE.—“Beside the Still Waters.” As we said of the last, this is so good that we cannot see why it is not better. Why, for instance, was it not made a horizontal instead of a vertical? The matter is sufficient to have filled the plate and got rid of the feeling that the great expanse of sky dominates the more important part of the picture, and yet, if the vertical was to be retained the placing could not have been improved. Then, why was the development not stopped just a little sooner? Both water and sky are whiter than they should have been, and more careful development might have given results that would have seemed more natural. But laying aside these might-have-beens; the picture as it is is very good except that the sky does feel a little too prominent, and would be better if an inch were trimmed from the top.

1928. S. F. CLOWNEY.—“Winter Landscape,” except for the leafless branches, might be the most brilliant summer day, and never even then was sky or road so white. Development has been carried so far that every light that should not have been more than half, is in the negative opaque, equal to the highest of the high, and consequently everything in the print is simply white. The subject and selection are good, especially had the camera been turned just a shade to the left so as to take the bend of the road a little from the edge, but the over development has rendered it worthless. The trouble you have taken to mount it shows what you think of it, and probably our opinion will disappoint you, but please look carefully at it and think how differently it would look if the road and sky were something nearer the natural color and you will feel just as we do.

1929. FRANK CRAFT.—“Glen Miller Park.” If your object was a record of a portion of the Park in a quiet day when the reflections on the surface of the lake were at their best you have succeeded fairly well, the photographs being in every way good except for a much too short exposure. From a pictorial point of view, however, nearly every thing is as it should not be. In the first place, hardly anything can be more unpictorial than a photograph, as this is, with the reflections on the water almost as distinct as the objects themselves, and before exposure you should have disturbed the water by the throwing of a stone or other disturbing object, and so have got only shadows instead of reflections. Then, the cottage or building to which the leading lights lead as to the objective point, is exactly in the middle of the composition, the weakest part, and where it should never be unless for some good reason which is certainly not here. And even had other things been right the short exposure would have prevented anything like a satisfactory picture, the sky and such part of the water as is in direct light having been developed to opacity in the hope of getting detail which, for lack of exposure, could not come.

In short, longer exposure would have

given you an excellent photograph, but not a picture in the true sense of the word. Study pictorial composition and give sufficient exposure and send again, and we shall do our best to help you.

1930. W. E. MARSHALL.—“A Lover of Nature.” We hardly know what to say of this, as it is a fairly good portrait spoiled by an unsuitable background. The latter is evidently a mass of foliage of which only such leaves as were in the best light are scattered all over the print as if dusted from a pepper-box while all the rest is simply black. The fault is a result of a too short exposure and an unsuitable arrangement of the light which buries the figure in the blackened leaves, and of over development which has made high lights or white spots where there should have been nothing higher than half-lights. Nor

is the title well chosen, as instead of a lover of nature the figure seems more intent on being photographed than on anything else. With that, however, we do not find fault as the pose is both good and natural, and if you had seen that the light was sufficiently on the foliage to show at least what it was, and to to a sufficient extent separate it from the figure, we should have had nothing for it but praise. Never forget, however, that you cannot get a good photograph of any kind without sufficient exposure probably twice as long as was given to this.

1931. F. D. MONTGOMERY.—"A Glimpse of the American River" belongs to the "straight" rather than to the pictorial phase of photography, and but for a too short exposure and the consequent over development would have been a very fine photograph. The short exposure, however, and the over development have resulted in a sky and the better lighted parts of the river being purely white paper while such parts of the foliage as are in shadow are only black. A longer exposure with suitable development would have given you the limpid swirl of the water more near its natural color and the sky in the tone that best suits it, while instead of the purely black shadows, you would have had something like true values, the thing most desirable in straight photographs. With such a sub-

ject, and with the pictorial as our aim, we should have placed the camera so as to make the river run out of the picture instead of stopping in the very centre, and used such a stop, and waited for such a light as would have shown something like the effect of atmosphere in the distance. In spite of all this, however, it is, as a photograph, better than nine tenths of all that come to the Portfolio, and, as said before, with a little more exposure would have been a very fine photograph.

1932. W. F. SCHMIDT.—"Along the Wildwood Path." We can make nothing of this, nothing that is satisfactory. It seems to be a print on green carbon tissue, but either from a negative so weak, or from a normal negative so slightly printed that neither path or indeed anything else can be made out distinctly. We have often said that we see in a picture just what we bring to it, but we must confess that we at least, have nothing to bring to this to make it anything that could have made it worth printing. At the same time it is so different from anything that we have hitherto seen that we should very much like to know just what your own ideas are regarding it; and for that purpose we shall not send it, as most others go, to the waste basket, but keep it in the hope that you will tell us just what induced you to send it to the Portfolio.

ANSWERS TO CORRESPONDENTS.

Questions for answers, matter for publications, and all communications to the editors should be sent to Dr. John Nicol, Tioga Centre, N. Y.

False Economic Ideas.

VESPER:—We had not supposed that there were in America "several druggists and chemists" so ignorant as not to know what was meant by "a ten grain solution," which is, of course, ten grains in each ounce of water or other solvent. We cannot at this time lay our hands on the formula to which you refer, but are sure that the salt to be used for the immersion of bromide paper to prepare it for use in exposure meters is *nitrite*, not nitrate of po-

tassium. The ordinary bromide paper is intended, and we doubt whether the vinco which you say is very fast, would answer the purpose as well. In any case, you had better stick to the disks sent out by the maker, even although you think 25 cents too much to charge, as you will find them cheaper in the end, taking into account the failures you are likely to meet in your attempts to make them.

The ordinary post cards may be sized with gelatine, but you will be nearer your

mark to employ the cards sent out by various makers already sensitized; or to get card of suitable quality cut for yourself. It is with cards as with paper, it is better to buy the result of experience than to pay for that experience by many failures which generally results in paying more for an inferior article.

Monochrome Focussing System.

BERNARD C. ROLOFF:—Focussing the image in a monochromatic light is almost as old as photography itself, generally by either covering the focussing glass with a blue varnish or grinding the surface of blue glass, but although often recommended it never caught on. We cannot say what the patentee proposes to use in his combined finder and level, but there are too serious objections to a glass and liquid combination as a lens for the purpose, the difficulty of keeping it tight and the effect on the retina of, say, a blue image with a white bubble moving about, in trying to adjust the image with the camera in the hand. The liquid may be any of the aniline colors dissolved in alcohol, but we should very much prefer, if we wanted to color the image in the finder, to do so by applying a suitable varnish to the under side thereof. A coat of a suitably colored collodion would do the business preferably, and being protected by its frame or let into the camera, would be perfectly safe. Thanks for specification

Depth of Toning.

C. A. CARMAN:—We cannot say just how long prints should remain in what you are pleased to call our combined bath, as it depends on several conditions which are variable; the depth of printing, the nature of the negative, temperature, etc.; but there should be no difficulty in seeing when toned sufficiently. Examine the prints from time to time by transmitted light and as soon as the image has ceased to show traces of *red*, toning may be taken as complete. You must remember, however, that prints get darker on drying, and should remove them while they are a little short of what you desire. With the right density of negative and the properly printed print there is no difficulty in securing

the beautiful purple brown for which this bath is pre-eminently suitable.

Compare Results.

ENQUIRER.—Why trouble both yourself and us with what you can so easily do for yourself? Having a Watkins, all that you have to do is to also get a Wynne, make the experiments and send us the results. We shall gladly publish them, notwithstanding what you think and "almost" say. Take our advice and give people credit for meaning to do the right, even if they, in your opinion, do make an occasional slip. You will be far happier in doing so, we know.

The rule you ask for is: to convert Wynne into Watkins, square Wynne and divide by 64; and to convert Watkins into Wynne reverse the operation, multiply Watkins by 64 and take the square root.

Symmetrical Lenses.

R. L. SIMPSON:—"Symmetrical" is not the name of any particular lens, but is applicable to all doublets having their front and back lenses alike. It is sometimes applied, but incorrectly, to lenses, though alike in style and correction, which differ in focal length. Correctly speaking, a symmetrical lens is one the front and back of which are alike in every respect, and consequently each are just about twice the focal length of the doublet.

Anastigmat Lenses.

I-WANT-TO-KNOW:—Whether the anastigmat has advantages over the rapid rectilinear equivalent to their additional cost depends on the class of work you intend to do. They may be summed up as greater rapidity because working at a larger aperture, better corrected and so giving better definition all over the plate, and flatness of field. The anastigmat is therefore indicated where rapid exposures are a necessity; in copying, especially such as maps, etc.; for most kinds of scientific work; and we may add, in architecture, where definition is an object and astigmatism a serious fault.

For general pictorial work, almost without exception they offer no advantage, and in some cases, such as street views, they are really not so suitable, or rather we should

say that the falling away at the edges of the rectilinear is an advantage. At the same time, if we were in the lens market and our purse could afford it, we should decidedly invest in the anastigmat

It's Not All in the Name.

W. L. MORRIS:—The name on the lens is not that of a maker, but of a dealer, but it may be good enough for all that. There are opticians both in Paris, France, and in Birmingham, England, who turn out large numbers of lenses and engrave on them the names of the dealers to whom they sell them; and although they are not submitted to the same careful testing that those of the more noted makers are put, some of them are very good. Judging from the specimens of its work you send there is nothing wrong with it, and if you do not make work of the highest class the fault is certainly not in the lens.

A Spoiled Daguerrotype.

IN A FIX.—The "copper tintype" was a daguerreotype, and you have destroyed it beyond redemption in trying to clean it before copying. No wonder it "came off with the least rub," as the image was little more than a mechanical deposit of mercury covered with a film of gold. You must make your peace with its owner as best you can, although we had not thought there was a professional photographer of an experience of over twenty years that did not know a daguerreotype when he saw it. Offer to take all the family and to make enlargements of both father and mother, and if you get off with that you should be thankful.

Timed Development.

FRANCIS MUIR:—Follow the indications of the exposure meter, adding about twenty per cent. thereto, and you may take it for granted that you will get better results from the developing machine than from development by examination until you have gained greater experience, and then you will not need it. That is, we believe you will be so satisfied with the machine that you will stick to it. As to the various times for the various developers, you can find out that as well as we,

and the experimenting will be a part of your education. We may give you the following hint, however. Cut off a portion of a film, and in the developer to be tested watch for the first appearance at an average temperature; add that to the factor and that will be the time in the machine.

There is Room for all Earnest Effort.

A WOULD-BE PICTORIALIST:—Although you ask us "how we stand for the second American salon," it is evident that you think that, in your own words, "we have our knife in it," and therein you are very decidedly wrong. Our interest in the advancement of pictorial photography is such that we are ready to welcome every honest attempt to further it. You are also mistaken in supposing that Mr. Rubincam is the only one that has raised what you call the storm. In our December number we had an article by Roland Rood, where it was shown that the 7,100 photographs were judged (?) in three sittings, which turned the thing into a farce at the threshold. Then in January we commissioned Mr. Zimmermann, one of the committee of management, to tell our readers what he thought and knew about it; the result being the astounding fact that the painter judges judged, not from a painter point of view, but from a photographic, a thing about which they were supposed to know little or nothing and the outcome is seen.

These and worse things are known and charged, and the king of the castle, the moving spirit of the whole business, declines to reply to the charges or to give an explanation of what, to say the least, needs explanation, on the ground of his time being "too fully occupied in preparation for the second American Salon."

Our position, then, is clear. With every desire to help in every possible way a second edition of what admittedly was a fiasco in its first, provided the natural lesson has been learned, we cannot advise our readers to have anything to do with it till there is some evidence that that lesson has gone home, till the errors of the past have been admitted and some assurance given that they will not be repeated.

O. B. Sanders

THE POOL IN THE MEADOW

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"THE PROOF OF THE PUDDING IS IN THE EATING OF IT."

Applied to the Actinometric Exposure Meter.



HE force of this good old proverb occurs to us as we read an article in a recent number of *Camera Craft* on "The fallacy of the exposure meter" and think of the thousands who have trusted to it without having once been betrayed. While it is possible that the amateur camera carriers, we do not care to call them photographers, are as numerous here as in Britain, there is ample evidence that the British amateur takes photography more seriously than does his American brothers, and the fact that the Watkins or the Wynne exposure meter is in almost universal use should go far to neutralize the statements of Preston E. Anderson, the author of the article referred to; as an article that has been so used for more than a decade with perfect satisfaction must rest on something better than even the most attractive advertising; and rest too firmly to be moved by any fanciful reasoning however plausible.

We shall not follow Preston E. Anderson's reasoning, however, as he shows clearly that the "fallacy" is not in the meter but in his interpretation thereof—that he does not understand the principle on which it works, else he could not speak of "the complicated instructions" required for its manipulation. Nor could he believe that the only thing the meter can do is to show the relative actinic value of the light, and that even the value of that was problematical.

As there may be others equally at sea as to the simplicity and efficiency of the meter, we give the following description and explanation, which should set at rest all question as to both; and as the Wynne meter is the one we generally use we take it, although what applies to it applies equally with only slight immaterial differences to the Watkins.

The Wynne Exposure Meter is in the form of a watch on the dial of which are two concentric rows of

figures, the inner one fixed the outer revolving. The figures on the inner or fixed dial represent seconds or fractions thereof, beginning at $1/128$ th of a second, and going on to 64 seconds; their use being to indicate "Actinometer time" and the time of correct exposure. The figures on the outer or movable disc are the f - x values or diaphragm markings; beginning at f -4 and going on to f -362, showing the speed of almost every plate on the market and whatever diaphragm or stop the photographer may decide to employ. On the upper part of the fixed dial is a circular opening with, on each side, a strip of painted standard test, leaving between them a V opening, into which, by a partial revolution of the back of the case, a fresh piece of test paper is brought into position ready for action.

The plate speed is given in f - x or diaphragm values, and to understand that is to realize the beauty of the simplicity of the meter. The "actinometer time" is the time taken to color the test paper to the deeper of the two test tints, that on the right of the opening, and the speed of the plate is the size of the diaphragm that will give a correct exposure in that time. Suppose, for example, the actinometer time to be 12 seconds, and that the plate in use, after a series of experiments, was found to be properly exposed in just that time with an opening in the diaphragm or stop of one-ninetieth of the focal length of the lens, it would be marked f -90, a slower plate might require an aperture of one-fiftieth and would be f -50 while one more rapid might require one of only the one hundred and fiftieth and

be marked f -150. In short, the speed of a plate is the size of the diaphragm or diameter of the stop in the relation it bears to the focal length of the lens that will give a correct exposure in the actinometer time; and the time for one f - x value having been ascertained it is easy to find the time for all other sizes of stops; and these, as we shall see, have been all so arranged on the meter dial that only two motions are required to tell the whole story.

For all ordinary work it is only necessary to slightly turn the back of the meter so as to bring a fresh piece of the test paper into the V opening already mentioned and expose in the shadow of the body till the paper colors to the exact shade of the standard test, counting in any way convenient the number of seconds required for the purpose. Suppose this number, as we have already done, to be 12, and that the plate in use has a speed of f -111, all that we have to do is to bring f -111 on the revolving disc in line with 12 on the fixed or actinometer time dial to see the time required for any stop we choose to employ. We want to employ f -16, and on running our eye to that diaphragm marking we find in a moment that the exposure is $\frac{1}{4}$ of a second.

Thus, for all ordinary work there are only two motions, each made in little more than a second of time; bringing a fresh portion of test paper into the previously mentioned V opening, counting the number of seconds required to bring it to the color of the standard test, and bringing the speed number of the plate into line with the actinometer time.

But there are exceptions. There is some opportunity for the entrance of the personal equation, and if it were not so photography would soon cease to interest a large number of its followers, and even these are more or less provided for in the meter. On the back of the more recently issued meters a number of exceptions are noted and modifications of the indicated time suggested. Sea and sky,

its first introduction, and we have pleasure in pleading guilty, feeling, as we do, that the plea implies a greater knowledge and acquaintance; that then as now we had the interest of the photographer at heart, and recommended him to what we supposed would most or best forward that interest. We are of the few mentioned by the writer of the article that inspired this, of those who through long

THE STORY OF EASTER

for instance, should get only $1/10$ of the indicated time, although we think that a mistake, as we also do the recommendation to give snow scenes only $1/4$. But they are there and the careful photographer will discover for himself such modifications as are necessary for the best work.

In connection with our recommendation of the actinometric exposure meter we are sometimes reminded that we rather threw cold water on

experience had acquired the ability to correctly expose by a kind of "intuition," and recognizing its value, saw in the exposure meter a substitute that would interfere with the acquisition of such a valuable power. Gradually, however, as we thought of the many years that had led up to this important acquisition, and of the many dreary failures that it implies, we saw that a system by which correct exposure could be secured at once

should not be neglected, and the more we saw of it the better it proved itself to be.

We would therefore say in conclusion that the more thoroughly the actinometric exposure meter is understood and the more frequently it is employed the greater will be the reliance that is placed on it; and that while the ability to secure correct ex-

posure by intuition, inspiration, or by whatever name it may be called, is invaluable, its cost in time and experience is too great for the present conditions; and he who would correctly expose should pin his faith on one or other of the popular exposure meters; only, as we always do, adding from 20% to 25% to the indicated time.

SOME HELPFUL AGENCIES.

By JAMES THOMSON.

When I first took to camera work, I thought best to subscribe for a magazine devoted to the interests of amateur effort and achievement. Nor have I ever regretted my so doing, deeming such an essential for novice and expert ambitious to keep in touch with the times. I thus got myself in position whereby I could become familiar with the photographic world, and the leading names therein. Now at the end of six years, half a dozen magazines I find none too many.

I have been somewhat surprised, however, to know of the large number of amateur workers who never read a publication pertaining to photographic matters. Nor do such people take the slightest interest in the movement in the photographic field.

The photographic monthly is as welcome as a spring in the desert to those who are in situations "far from the madding crowd," keeping them in touch with comrades in more strenuous circumstances. Needless to remark, the class that considers photographic literature superfluous, is com-

posed principally of snapshot fiends, and those who are mentally indolent: for it is true there are many such in every civilized community. There are those who consider it something of a task to read at all, no matter how much curiosity may be excited. Such people as affects photography it will be found, however, put themselves on the same plane with the workers of real worth, when the fact is, there is nothing in common between them, and the product of each proves it.

If people but knew how unworthy the pictures are which they at times pass around expecting praise they would hesitate long before doing so. But they do not realize the badness of their output, living, as many of them do, in a fool's paradise, and receiving the plaudits of flattering friends, often entirely incompetent to differentiate good art from bad. Many of these workers need the services of the critic, but they of all people are the most restive under unfavorable comment.

It matters not how high up one may be, criticism, providing it is compe-

Buffalo C. C. Exhibition

CHORES

W. H. Kunz

tent, based on superior knowledge born of experience, and unbiassed, can do no harm, and very likely great good. One becomes in time so accustomed to one's own work, it is difficult to render impartial judgment thereon. In photography as in other departments of art effort, the most eminent workers are never other than students, and the longer they live the more are they impressed with the fact, that only by study will they be able to keep at the head of the procession. These workers, who really have done something notable, see clearly that compared with what is still to be learned, they actually know but little. Thus it is reserved for the "know it all" to be satisfied with self and attainments.

If the expert workers who have tasted of the fruitage of achievement, and enjoyed the sweets of applause, thus appreciate their shortcomings, how much more is there need of advice and guidance for those who are in truth but the veriest tyros, as no doubt the generality of snappers are. The class of people who thoughtlessly snapshot everything that comes their way, leaving it for others to "do the rest," still claiming any credit in the result as their own. Much credit may be due the developer and printer, yet these individual snappers will calmly assert that the work is theirs. "I cannot tell a lie. I did it."

It must, of course, be conceded, there are excellent pictures made through the agency of the film camera, and every salon testifies to the fact. But such pictures are as a rule made by serious, thoughtful men and women acquainted with every phase of photography, and who take this means of recording what they see, be-

cause it is the only logical method possible for that particular case. Very different are these from the average "fiend" to be met with; especially abroad.

Personally, like many another, I for a long time worshipped at the shrine of the perfect negative so-called. But fortunately I have seen a new light, and now discover the negative to be but a means to an end, and which ultimate purpose is the expression on a sheet of paper, etc., of our pictorial ideals. The negative of transparency-like quality may be pleasing to the eye, but it does not follow that the print from it may result in a fine picture. In fact, it is extremely likely to prove a disappointment in this respect.

In a photographic periodical we may learn how to perform the various mechanical portions of the business, but to my mind the artistic side is of greater moment. The negative may not be beautiful to look at, but what does it matter, providing we get the feeling or impression we intend to convey to the spectator in the finished picture. To my mind the negatives that have been the means whereby some of the greatest pictures in the world have been made possible, are not such as would send the average worker into ecstasies of delight. Imagine if you can how the negative looks that produces the low toned picture of our salons. Nothing of a transparency quality in *that* with hardly a speck of white in the composition, and to the uninitiated looking flat.

Referring to the department of criticism in a photographic magazine, when properly conducted it may be

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EDGE OF THE MARSH

W. E. Bertling

made a medium of great value in correcting errors, both chemical and artistic, but more especially the latter. Competent and unbiassed judgment (and there can be no such a thing without a knowledge of composition) as expressed in monthly comment can be made a means of genuine benefit, but to carry weight the critic must be one in whom the craft have the utmost confidence. Given a knowledge of composition to start with, it will not take a person long to learn all that is necessary to be learned to enable one to perform the chemical operations essential to the production of a suitable negative. Therefore, to my mind, the artist who can himself produce excellent, saleable paintings, and is thoroughly grounded in pictorial principles, is the person of all others to whom we can with confidence turn for advice. Are not the rules governing the production of a painting and a photograph the same? Of course the absence of color in the latter makes the problem somewhat different, but in composition the rules that apply to the one are in order for the other.

Providing criticism steers clear of personalities and abuse, the absolute bald truth should be spoken regardless of the standing or injured feelings of the subject. The truth, though sometimes no doubt unpalatable, is what is required in the critical judgment of pictures. The wishy-washy dealing in generalities as sometimes to be met with is nothing but a cunning device for suppressing the truth, and letting some favorite individual down easy. How can a worker with any regard for reputation among those who really know, be at all satisfied with the so-called appreciations one meets with?

These are modern devices for the gratification of the vanity of individuals, and calculated to impress people incapable of judging for themselves.

Some people, however, taking advantage of their position, indulge in caustic and stinging remarks, which often border on the offensive. Impertinence under the guise of plain speaking aimed at those who are in a measure defenseless is cowardly. Men sometimes thus address others in a manner which if the case were reversed, they would not calmly tolerate. This is the frequent method of the critic in the lay press, of whom Mr. F. Edwin Elwell in the *Boston Transcript* had this to say, "Our art critic is apt to be just an ordinary penny-a-liner, a college-bred man very often, with a considerable amount of book-learning, but little feeling for art itself. This wonderful compound of learning and self-conceit has added very little to the development of true art." And again to quote H. R. Poore in "Pictorial Composition": "The shallowness of the average review of current exhibitions is no more surprising, than that responsible editors of newspapers place such consignments in the hands of the all-around reporter, to whom a picture show is no more important than a fire or a function."

As regards criticism, then, as we find it in the photographic monthly, with large numbers of hopelessly bad emanations constantly submitted, I have no doubt but what the temptation is great to say hard things of them. To my mind the picture that is thoroughly bad should be passed along without much ceremony. The aim-

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BUDDING WILLOWS

C. A. Georger

less, under-exposed, thoughtless snapshot, should be beneath criticism, particularly when void of pictorial qualities. A simple statement of fact would be sufficient in such a case, and the temptation to say something smart put aside. Should this be done there would be small occasion for getting aspiring genius provoked, for strange

To be held up to public ridicule is not pleasant, to say the least.

No; it is better far to avoid giving offense where friendly feeling is more desirable, and the picture that is bad chemically, and hopeless artistically, may be dismissed in manner not calculated to do so. Furthermore, when the critic has condemned, he should be

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DESOLATION

Will A. Hatch

as it may seem, some of the most hopeless productions are considered masterpieces by their makers. To be told in cold type that our cherished gem is the worst example ever seen, or that a picture is so bad it would be difficult to find a title for it, is something not likely to induce pleasurable feelings, even though it be the truth.

able to give his reasons therefor. To remark, as has not been unusual, "We do not like this picture, and the more we see of it the less we like it. It is easier, however, to say this than to point out just where the fault is," etc., etc., seems like a confession of weakness on the part of the judge. There is apt to be too much of this "I do not

PORTRAIT
Buffalo C. C. Exhibition

Spencer Kellogg, Jr.
From a carbon print on porcelain

like thee, Doctor Fell" sort of criticism and nothing does more to undermine confidence. The knowledge that is so superior that it can elect to sit in judgment on the quality of the work of others, should be able to point out the trouble and perhaps the remedy. Should the picture violate the rules of composition it ought to be easy to point out in what particular. It should therefore be a matter of demonstration and not of doubt. There may be those who can find help and inspiration from this kind of reviewing, but I must confess I am not among the number. Give me rather the person who with unerring precision born of knowledge, and confidence inspired by actual experience, can place the finger on the sore spot, even though by doing so, that person may cause me pain and discomfort. One must sometimes be cruel, in order to be kind. Such people I have known, and their advice in forty years' experience in connection with artistic work has been to me of the greatest benefit.

Criticism, constructive rather than destructive, is in order; it is so much easier to tear down than to build.

Needless humiliation weakens and incapacitates.

We should not rail at the fault, when we cannot even suggest the remedy.

Sarcasm, while a powerful weapon, is not the most effective for good, though some esteem it such.

To my mind, then, the well-conducted photographic monthly is a most helpful agency to all aspiring workers, and more especially to those who are new to the game. I can speak from experience, for never was

magazine more helpful than when I was a beginner. Furthermore, I have always looked upon a department of criticism as most useful, more particularly as affecting those having but a limited knowledge of composition. The impression is not uncommon that nature is always perfect and transcripts thereof must of necessity be beautiful and harmonious. It is in truth rarely the case that such perfect conditions obtain, and it should be the first duty of the critic to show why.

It must be plain to many that it is not always the magazine of greatest bulk that is of most value to advanced workers, whatever may be conditions as affecting beginners. Giving all credit for good intentions of others, the eminence of an editor, and personality as well, counts for much in some quarters. Personality especially carries considerable weight and I do not know of anything that counts for more. There are leaders in photography, to place the names of whom at the head of a magazine would in itself be a magnet to draw from among serious workers, whose interest would be inspired through the knowledge that these eminent workers had done good work and might impart their secret of success to others. When an individual has done something worthy of note he may be able to show others how to do likewise.

It is the same with others I have in mind. The gentlemen who preside over some of our more popular publications to mention which would be in the nature of making invidious distinctions, and comparisons are said to be odious. However that may be, there are no two magazines exactly alike, and editorial personality must

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THROUGH THE MISSION ARCHES

E. B. Sides

of necessity have much to do with make-up and appearance artistic or otherwise. Moreover, the editor familiar with older generations will be likely to have something to say that will be of interest to the new. A ripe experience is a well upon which one may draw with profit to those who are privileged to drink. He must be indeed a dullard who from a long connection with things photographic has nothing of interest to divulge. Some of the newer element may sneer at old time practitioners, and dub them has beens. Perhaps the deliverance of some of the pioneers are ever so much more interesting (did they but know it) than their own.

We should never forget that some things worthy of mention happened before our time. We are but too prone to imagine that history began

the day we were born, and although photography is not very old innumerable things happened of which the present crop of camera enthusiasts have no knowledge. Take the Reflex Camera, for instance. I have heard some people boast of it as a novelty, when as a matter of fact it is simply in principle the *camera obscura* of the early days. Seven years ago in moving to new quarters I found a lot of stuff stored in the cellar of the house by the owner. Among the lot was an old *camera obscura* of Italian make, and simply as a matter of curiosity I fixed it up and took some pictures with it. I noticed also that the size of plate used in it was the cabinet size of present day professionals, which suggests a reason why we find them employing that plate of odd dimensions at the present time.

WORDS FROM THE WATCH-TOWER.

BY WATCHMAN.

The elevation of photographers, so much talked about at conventions and other meetings, will never be accomplished so long as so many of them need, or think they need to keep their places of business in active operation on the Sundays. This has been suggested to me by a notice in an English exchange telling of a Dewsbury photographer who on being fined five shillings and expenses for keeping open on a Sunday, expressed the wish that the Dewsbury Magistrate would do with him as did those in Hull. There they agreed that on condition of his paying to the clerk five shillings per week they would not trouble him; but the Dewsbury folk were not so accommodating, but told him to look out for himself, hinting that if he cared to run the risk he might find that there was such a thing as an accumulation of offences or rather of the punishments therefore.

The photographer who cannot make a living without Sunday work should turn his attention to something else.

* * *

The Queen of Italy sets a good example to mothers generally in preparing for a photographic record of her son, the heir to the throne, from his childhood till he comes of age. She has had prepared by a well known maker of albums in London a "Baby Album" containing among other matters twenty blank pages in which will be pasted a photograph of the child year by year till he is twenty-one. Such an illustrated record would be

invaluable in any family and I hope the fashion will be universally followed. I speak feelingly as I have amongst my most valued treasures just such records of my own boys, most of whom have already made me several times a grandfather.

* * *

Felix Raymer tells the readers of a contemporary that he believes that not more than twenty per cent. of the operators in the country, meaning in America we presume, know how to focus their pictures; and he may be right which is more than I can say when he attempts to show them the better way. He has not yet learned the folly of designating a lens by the size of the plate that it may be made to cover instead of by the only correct way, its most important feature, the focal length. To speak of a 5x7 or 8x10 is meaningless but to say a ten and a half, or fifteen inch lens tells at once the size that either will give with an apparently perfect perspective. When a photographer speaks of the covering power of a lens without regard to its length I know without his telling me that there is much about lenses that he does not understand. Surely there is room for improvement in the following paragraph.

It has been my experience that where a portrait lens is sold as a 5x7 or 8x10, or whatever the size plate it is sold to cover, it is not necessary to stop it down at all. If it is left open it will give the effect for which it was sold. If it is stopped down to make it

"cut deeper" why not buy a smaller aperture in the beginning, and then the stopping would not be necessary? A small rectilinear made to "cut deep" can be secured for ten dollars, but a fine portrait lens will likely cost from seventy-five to five hundred. Why should we pay it, and then stop it down, trying to get the effect that the cheap view lens would have given?

* * *

Surely the time is come for the ending of classes at exhibitions of photographs, as between the so-called hand and other camera work. Indeed the only classes that I can think as necessary is where a club or society gets up an exhibition the work of members and outsiders may be separated with advantage. But the question as to what is hand camera work? is still being agitated and *Photography* devotes the following pretty long paragraph to it, although I think it is something like making a mountain out of a molehill; there not, in my mind being any other answer than that *hand camera work is done with the camera in the hand.*

"The series of articles on hand camera work now approaching completion, remind us that there is a very wide difference of opinion upon the subject of what constitutes 'hand camera work,' properly so called. The flip-pant may dismiss such an enquiry with the off-hand definition 'Hand camera work is work done with a hand camera,' but if we think for a moment, we shall see that not only does this not define a hand camera—unless on the same principle we say that 'a hand camera is an instrument with which hand camera work is performed'—but it does not state whether *all* work done with a hand camera comes within the

category. The question is not altogether an idle one, such as was put to us by an unknown enquirer through the post some years ago, who asked, 'How large is a hand camera?' We had a committee meeting on that enquiry, and eventually committed ourselves to the statement that 'a hand camera is the size of a small box.' But 'what is hand camera work?' is a more important question, since from time to time there are competitions limited to 'hand camera work,' and there are societies for furthering 'hand camera work.'

* * *

"Whether it is desirable to attempt to draw a line between hand camera work and other photography is another question. We think not; and believe that hand camera work should stand out by its obvious merits and limitations. There is no merit in taking badly with a hand camera something that could be done much better with a stand camera, nor should work which is done with a hand camera used on a stand, with a focussing screen, be entitled to some 'benefit of clergy,' because the instrument was called a hand camera. But classes there are for hand camera work, and a clear definition is desirable.

* * *

"The particular name given to the apparatus has little or nothing to do with the question; it is the particular way in which it is used which should determine the class into which the work is put. This means that hand camera work is not necessarily work that is done with a hand camera, nor work that is done with any kind of camera, so long as it is held in the hand. If a support is convenient,

there seems to be no reason why it should not be used; and a camera resting on the knees is as much a hand camera as when held in any other way, until, that is to say, we have classes for knee camera work.

"The distinguishing feature of all work shown in an exclusively 'hand camera work' class should be that it is work of the kind for which hand cameras primarily were designed; that is to say, that it is '*spur of the moment photography*.' If anyone has a better definition, we shall be glad to publish it."

* * *

Senex, in *Photography*, gives the following description of a lantern lecture which he attended, and although it may be slightly exaggerated it is nearly like what occurs in various parts of even places nearer home, and which is so likely to injure what should be both instructive and amusing exhibitions that I gladly reproduce it as a caution, a lesson of what to avoid.

DEADLY MEDIOCRITY.

The "lecture" was just commencing. About a hundred and twenty slides were shown, many of them clearly from good negatives, though nary a one had any approach to pictorial interest. They were diagrams of rivers, mountains, trees, cattle, ships, and churches. The slides were of that nondescript quality which defies praise or fault finding. They had no noteworthy defects; they had no noteworthy merits. They were not bad slides. They were not good slides. Their tone was quite in keeping with their other characteristics. It was neither a rich brown nor a warm black, but a middling neutral tint. If the

slides had been good, I might have tried to watch them—One cannot "look at" slides as they are usually shown, they are only to be watched as they flit by—and disregard the lecture. But this was rendered impossible by their mediocrity. I had to listen.

THE STATISTICAL ORATOR.

The oration was carefully purged of human interest. It was as sympathetic and as suggestive as a table of logarithms. The lecturer had prepared an abstract or digest of one or two of the most comprehensive and least useful of the guides to the district visited, had split it up into a series of sentences of approximately equal length; and intoned it from a manuscript what time the slides passed by. The height of every hill and tower, the breadth of the rivers, a list of tributaries on the right bank of one of them, the contents of which were shown, some abbots who had abbotted at a ruined building, the number of scholars at an institution, were given, together with a date for everything.

A QUESTION OF PRICE.

But the facts that seemed to be selected with most trouble were prices. Given that lecture I could have got out an estimate for a builder's clerk. We had the cost of building a bridge, a goal, a cathedral, and a mountain railway. The value of jewels at a shrine. The monetary loss incurred by three fires. The expenditure in restoring certain edifices thereafter. The money made by a noted tailor before he built his palatial house, the money he spent on the p. h.

* * *

The Fatal Flash-Light continues to

get in its work. The latest comes from Omaha, where a photographer was photographing a saloon, and had his stock of powder in a grip at the feet of his tripod. According from the account which we clip from *The Chicago Record*, when the powder in the pan was ignited some of the sparks fell into the grip, exploding the whole supply, with the result that one, Al-

bert Butler, the photographer, was killed, and William Coffey, W. J. Murray, and M. Levey were seriously injured. The carelessness in the use of those dangerous flash-powders is incomprehensible; and it is all the more so from the fact that pure magnesium ignited by a tuft of gun cotton is quite as effective as any powder can be, and at the same time perfectly safe.

NOTES.

CHARITY, while one of the most vaunted seems at the same time to be one of scarcest of virtues, especially with a certain class of our British brethren when they come to speak of America or anything appertaining thereunto. The latest example of this lack of charity or perhaps something worse occurs in the latest number of *The Photographic News*, where Henry W. Bennett, otherwise a very good man, is uncharitable enough to charge the whole of the American photographic papers with what may be done by only one or two, and may not, so far as we know, be done by any. And worse if worse be possible, he by very close implication charges one journal, ours, with what to our knowledge has never been done since it came under our charge.

As his letter is a fair sample of many such we give it entire as follows:

SIR: In this week's *Photographic News* you publish an extract from the AMERICAN AMATEUR PHOTOGRAPHER, in which is given a method of mounting gelatino-chloride prints without losing their glossy surface. This extract is a literal transcript of the prin-

cipal portion of an article that I wrote for one of your London contemporaries, *Photography*, about two years ago.

The method described is that which I use invariably for mounted prints on gelatino-chloride paper. It is exceedingly simple, and the prints look well-finished. They should not be kept in water for more than about seven seconds for wetting before mounting, and, after blotting off superfluous moisture, any ordinary mountant may be applied to the back in the usual manner. When the print is placed in position on the mount it may be rubbed down with blotting-paper. If any fluff from the blotting-paper should adhere to the surface, it must be left until the print is quite dry, when it can be easily rubbed off with a soft cloth.

Unlike American photographic papers, you acknowledge the source of useful or interesting information that you extract from the world's press for the benefit of your readers. They, on the contrary, copy freely, and publish their gleanings as original matter.

Photographic workers in this country give the results of their experience

very freely to their fellow-workers. When American editors find these results worth offering to their readers they might, at least, give the writer the credit of his work, instead of passing it as their own. Yours, etc.,

HENRY W. BENNETT.

We cannot at the moment lay our hands on the paragraph, but say with perfect confidence that if it came to us in the shape of a communication we could not know its source, and took it for granted that it was original, but that if, as is most likely, it was extracted from some of our exchanges it was accompanied by the usual acknowledgment. One or two black sheep in a flock does not blacken the whole, and Henry W. Bennett would not have been more than just if before making the charge he had looked into the facts.

Carelessness nearer home should not be overlooked. Our respected friend in control of *The Photographer* compliments our Watchman's eye on the mistakes of our contemporaries, but follows with a paragraph so carelessly placed as to lead his readers to suppose that it refers to ours, leading them to suppose that we could have been guilty of giving silly answers to equally silly questions as to the doings of professionals of which we know nothing; how they wash or when they trim, or indeed anything else, nor, as a rule, do our readers care anything about it.

So far as the other answers mentioned, if we understand them aright our friend is wrong. The ink he mentions was not wanted for writing on the dark parts of the print, but on the negative, and his white ink would have been useless for that purpose;

the object being to make a transparent writing on the opaque part of the negative, and for that purpose the potassium iodide ink was the right thing. Nor is he more accurate in regard to the removal of the yellow stains caused by insufficient fixing. The yellow produced by the action of light on either paper-print or negative by the insoluble salt of silver and hypo left in the film cannot be removed by anything we know that will not also destroy the film. This, however, by the by, we do not care to defend them, but only want to say that the paragraphs do not refer to our magazine, and our fault with our friend is that he did not take care to let his readers see that they did not so refer.

THE LATE E. W. NEWCOMB: We regret to announce the death of this well known editor, which occurred at Stamford, Conn., on March 29th, hardly expected, although for a considerable time he had not been in good health. His early experience with photographic material was gained with the Scovill & Adams Co., after which he tried, although without much success, the dealing on his own account. It was then that we first noticed him, and through a sheet of simple instruction in carbon printing, a multum in parvo, the outcome of a knowledge that should have brought greater success than it did. Unequal to the unsuccessful struggle, he accepted the editorship of *The Photo-American*, then owned and published by Chas. Loeber; of which later on he became sole owner. After pushing the business along with the manufacture of a series of photographic specialties in New York, and at the same

time struggling with ill health, he removed to Stamford, where he continued till his death.

For a time he was a voluminous writer on photographic subjects; superficial rather than deep, but in a style that to a certain class was attractive: but lately his specialties have occupied most of his time, or at least all that he could spare from his own journal.

SENDING ROUND THE HAT: We have not for some time taken much interest in the Photographers' Association of America, the National Association as it is sometimes called, and therefore we should perhaps say nothing about its doings; but when we hear so much about the raising of the status of the photographer we are prompted to ask whether they take the best means for their elevation. The following, which we extract from *The Photographer*, expresses very much what we feel, but it would not be too strong if it were much stronger:

We have just been reading a circular letter sent out by the Entertainment Committee of the Photographers' Association of America—the National Association, as the circular says. This circular states that “it devolves upon the committee to provide for the entertainment of the members of the Association,” and the entertainment provided will depend upon the amount guaranteed. This letter is addressed to manufacturers and dealers only, situated in any part of the country.

We have always held that this additional taxing of the manufacturers is unwarranted. There is a big surplus in the treasury of the Association,

built up of the profits of the annual conventions, which profits are the result of floor-space rentals and advertisements of manufacturers and dealers. Manufacturers not only place an advertisement at a good round figure in the Association programme—they not only now pay high prices for the privilege of doing business on the floor of the convention—but they are also at very heavy expense to show their goods in a proper and attractive manner, and keep two or more men on the ground. The photographers who go to these conventions go to please themselves, not the manufacturers. Why, then, should the manufacturers pay for the entertainments? As a regular attendant of the last four national meetings as a manufacturer's representative, we are perhaps better aware of the feeling on this subject than are the officers and members of the Association. We always knew that we had contributed to our entertainment fund, but what that entertainment was, it was hard to find out. The main entertainment feature was generally given in the name of some local house or big manufacturer, and the balance mainly conspicuous by its absence.

The entertainment feature has in years gone by been the one thing generally mismanaged at these big conventions, and it is sincerely to be hoped that the committee appointed for this year's national will do something to retrieve past failures. It is made up of thoroughly competent men—Evanoff, Parkinson, Di Nunzio, etc., J. Di Nunzio alone being a whole entertainment in himself. We do not blame this committee for sending out these above national circulars. They

are expected to raise the money in this manner, and we hope their efforts will be very successful; but, just the same, we wish to go on record as protesting against this additional tax—be it ever so willingly paid—on the manufacturers and dealers.

SHELLAC BACKING.—According to the *Bulletin of the French Photographic Society*, M. Balagny highly recommends a backing solution made as follows. Four ounces of shellac (the author recommends the bleached, but orange is better) and six drachms of borax are boiled in eighteen ounces of water till the shellac is dissolved, and to the cold solution is added thirty grains sodium carbonate and one drachm of glycerine. To this solution is added sufficient of a mixture of equal parts of burnt sienna and dextrine to make it about the consistency of thick cream. It may be applied to the plate with a brush or on a piece of sponge, and it will not scale off or make dust on the film when dry, while it is easily removed by a damp sponge.

A JUDGE'S OPINION.—The following extract from an article in our British contemporary, *The Amateur Photographer*, written by F. H. Evans on the Birmingham Exhibition, at which he was one of the judges, shows that it was so much like exhibitions nearer home as to make it of considerable interest to photographers on this side. The reference in the first sentence is to the Birmingham Photographic Society:

This most excellent provincial society must be one of real influence, to judge from the enormous number of frames submitted to it, from the great

number of workers desirous of the honor of an appearance on its walls; but it also shows in what a sad condition photography is at present. The easy accomplishment of ordinary work, the too facile nature of the camera-given image, is leading to a really shocking multiplying of very ordinary things; work of no special vision, of no special mental effort, no special knowledge or use or control of tools, no special aims. This may seem too severe an indictment, but it is really a fair one; and it is only to be removed by societies refusing to hang anything that is not *much* above respectable mediocrity, and by judges refusing to medal or make awards to anything that does not very markedly stand out for either extraordinary technical accomplishment, or a seeing of something new, and a more or less successful putting of it on paper or glass—the seeing, the vision, is the main thing. So easy comparatively is the control of photographic processes up to a certain point, that the man of vision and thought need not doubt about his easily acquiring a power to fairly well expressing himself, well enough to be fully recognized and appreciated. “Unto him that hath shall be given” is true here as everywhere else; and therefore let all awards, when they have to be given at all, be given only to such as show a real insight into and desire to record striking problems of light and shade. Here I would like to make a general observation as to medals; why should there be more than one sort? Bronze is quite sufficient if no other is given; and I would replace the “Certificate” (as was also suggested by a fellow judge, our artist colleague) by “Hon-

orable Mention"; this could be more honorably and satisfactorily received than is the mere Certificate, and the one sort of medal would also be of a much more distinctive character of praise.

Scores and scores of frames passed before us, of which one could only remark, what *was* it done for, what could the man see in it at its finish to keep it at all, let alone frame it up and send it to worry poor judges with? Of course it must be that these things have to be made; if no attempts are made nothing is learned; but—why send them for exhibition?

PHOTOGRAPHS A CENT EACH.—The following paragraph, which we clip from *The Photographic News*, may give a hint to some of our photographers here, especially such as are complaining of little to do. It is always possible to *make* work if one only knows how:

"Twelve photos for sixpence," with the further announcement, "Novelty: We provide sailor's, soldier's or policeman's uniform, one penny extra." Such is the placard boldly displayed in a shop in the city (says the *Birmingham Dispatch*). Among the specimens in the window are to be seen some remarkably precocious soldiers, sailors and policemen. The uniform department appears to be particularly attractive to the young lady clients of the firm—every one has clients nowadays. A stranger would imagine from the pictures that our shores were defended by any army of Amazons, that ladies contributed largely to our supremacy on the sea, and that though deprived of a practice at the bar, the

more important sex could at least enter the police force and become limbs of the law.

MOUNTAIN CLIMBING IN THE BIOSCOPE.—The following paragraph from *The British Journal of Photography* shows a zeal almost unparalleled in the moving picture line, giving a realizing of mountaineering hitherto impossible:

SOUTHAMPTON CAMERA CLUB.

Mr. Ormiston Smith lectured before the members of this club on Monday last, his subject, "Mountaineering Life," attracting considerable attention, inasmuch as it was illustrated throughout with some unique bioscope pictures. The lecture dealt in realistic fashion with various perilous climbs undertaken by Mr. Smith and his party, the dangers of which must have been considerably augmented by the carriage of the camera for securing the animated pictures. The ascent of Mont Blanc, the Jungfrau and the Matterhorn, were all treated by this method of portrayal, and proved of more than ordinary interest.

A run over the entire length of the Gorner Grat Railway, and a moving picture showing the rush of an avalanche, were among the novelties, while films fully illustrating the dangers of mountain climbing were also shown. Ordinary slides of great merit were interpolated between the display of animated pictures, and Mr. Smith concluded his lecture with pictures of the Swiss sports, skating, tobogganing, etc., the humor of which afforded an excellent foil to the tension brought about by some of the preceding representations.

The same *Journal* says: "The modern society photographer would be brave indeed if he adopted the methods of the portraitist in the anecdote related in the current number of *'The Lady's Pictorial'*: 'On one of the large P. and O. boats going to Australia there happened to be a Chinese artist noted for his quick portraiture. He was soon surrounded by a crowd of the fair sex, who wished to have their portraits painted. He, not unwilling to turn an honest penny during the tedium of the voyage, agreed to make rapidly finished sketches of each sitter. He asked each lady whether she would have the portrait 'handsomey-handsomey,' or 'likey-likey.' Not one of the sitters had the moral courage, in the presence of the sterner sex, to admit what was doubtless the desire of their hearts, so said they wished them 'likey-likey!' Now, the Chinese are remarkable for their extreme fidelity in copying, so when each sitter was rewarded with a representation of herself, the result was not always as pleasing as could be wished, and many of the paintings were successfully smuggled from the saloon, and surreptitiously dropped overboard in the dead of night. One lady, braver than the rest, remonstrated with John Chinaman on the ugliness of her portrait; he explained in his pigeon-English that he had 'askey likey-likey or handsomey-handsomey—no handsomey, if likey, how can?'"

A SIMPLE SULPHIDE TONER.—

Much has for some time been written on the sulphide toning of bromide prints, and so complicated and so uncertain did some of the methods seem

that many have been deterred from adopting it. It is really, after all, a very simple operation, and we know by experience that no better formula can be adopted than the following, which we clip from *Photography*:

At the Polytechnic Photographic Society's meeting on the 23rd March, Mr. John H. Avery strongly advocated a toning bath for bromide papers, which, he said, was economical in working, easy to manipulate, and free from a tendency to blister the paper. Although specially designed for use with the "Wellington" brand of papers, it was equally useful for other makes.

The formulæ are as follows:

No. 1.

Potassium ferricyanide ... 400 grains.
Potassium bromide 600 grains.
Water to 10 ounces.

Dilute one ounce of this with nine ounces of water, and allow the prints to bleach in this. Rinse them in water and transfer them to

No. 2.

Sodium sulphide 1 ounce.
Water 10 ounces.

Half an ounce of this is diluted for use with nine and a half ounces of water.

This toning solution, the lecturer said, had been exhaustively tested by Messrs. Wellington, and he had the greatest confidence in recommending it for use with their papers. He remarked that whilst amidol had been used for the development of the prints he was toning that evening, it was quite possible to get as good results after using any other of the usual developers, but he could recommend edinol as one of the best.

THE PSYCHOLOGY OF THE PICTORIAL PHOTOGRAPHER.

BY ROLAND ROOD.

It has often struck me that as a class pictorial photographers present a most conceited appearance; they are so full of themselves; and so sensitive! even unto touchiness; and they do so lay down the law. Why! it is almost impossible to suggest to them anything regarding their art, but what they are hurt, flare up, sputter and present an appearance, which, to say the least, is laughable. And their long hair and flaring cravats, which they imagine must stamp them in the eyes of everyone as being geniuses, but which in truth, being totally out of tone with this progressive age and republic of ours, only produce upon the ordinarily well balanced mind the effect of uncleanly slovenliness! And the exaggerated and intense earnestness! Why is it all?

A. Horsley Hinton when he was in this country last Spring commented upon these amusing traits, and in an interview in *The Photographer* in May let the Americans understand that much as he sympathized with their work, no Englishman could endorse their velvet jackets or the habit of wearing the heart on the sleeves.

So then, it appears that all pictorial photographers are not alike, that the European, or at least insular English soil, breeds a different species, and that an equally frank criticism from an American of English pictorialists published in an English weekly would not have created the feeling and touched sensitive parts as did Hinton's

for, although it may not be generally known, after Hinton left us it was voted that he did not wear velvet gloves. But be this as it may; let us grant, if Hinton so likes it, that he and his British confreres are different from us; why is it then that we are so dreadfully funny? Why do we even at times laugh at ourselves? Look at the following and see if you do not agree with me. In the March number of the AMERICAN AMATEUR PHOTOGRAPHER Chas. R. Ludlow spreads his heart over half a page and tells us that when he subscribed to the magazine it was with the idea that he could learn something from its portfolio—but now he is "disgusted" with the criticism his subject, No. 1865, published in the January number, has received at the hands of the critic, which criticism he refers to as "mean sarcasm," "cutting," "severe," "disheartening," "absurd," "butchery," and "roasting." And Mr. Ludlow, with childlike naivety also informs us that he has "been complimented on several occasions by some of our leading photographers and photo. critics on this picture and it was also accepted by the International Photographic Exchange and entered in the special state volume."

It is not my desire to criticise the "critics" or "leading photographers" who will compliment or laud such stuff as the print referred to. Suffice it to say that their conduct is a heinous sin and equally deplorable is the

folly of those who take seriously such incompetent opinions as a guide to their progress. I will also here register a caution against attaching any importance to the awards in the photographic contests that are being carried on by many newspapers and weekly and monthly periodicals outside the photographic field. Send them prints by all means, if you do not object to keeping them supplied with illustrations; take their money, if you are lucky—for it is a pure case of luck or gamble—but, as you value your self-respect or hope of becoming a master of your art, do not for a moment think that the picture credited with the prize was necessarily the best one entered in the competition, nor is it likely that it possesses one trait that should be taken as an example to follow.

Certain of these publications having "photographic departments" also essay to criticise prints! There is where Mr. Ludlow will find the kind of criticism he sighs for—courteous, soothing, flattering; bringing to mind the lines:—

Lift me up tenderly,
Handle with care,
Fashioned so slenderly,
Young and so fair.

I have not the least idea who Mr Ludlow may be but he says in his letter of complaint that he subscribed to the AMERICAN AMATEUR PHOTOGRAPHER with the idea of getting some help in the way of "bettering his photography" and I am prepared to affirm that he has already derived more real lasting benefit from the "Portfolio" criticism than from all the gush or compliments he may have received elsewhere. Were it not for

the serious aspect there is something irresistably comical in the attitude of many of our would-be pictorialists who court flattery under the guise of criticism. When the criticism is really sincere and of real value it is liable to wound a sensitive nature, but such wounds are easily healed in the light of awakened consciousness to inherent shortcomings and inspiration to renewed efforts.

After a close study of our pictorialists I have come to the conclusion that they are so funny because, *with very few exceptions*, they are still in the amateur stage; they are in the process of evolution from the state of layman to that of artist, and being neither one thing nor the other, produce that incongruous effect that is so often attendant upon incompleteness. Our photo-pictorialists are still *art students*. Now the art student is cut only after one pattern, be he of what nationality you choose, or place him in what part of the globe you please; and his gradual change from the mere tyro to that of the full-fledged artist always passes through the same phases; his evolution recognizes only one law. And whether he be a student of painting, music, sculpture, or indeed of any of the fine arts, it is all the same. So I propose to draw for you a little picture of the Parisian painter student, a type we are all more or less familiar with, and then we will be able to compare and see if I am not right in my assertion that the American photographers' funniness is merely that of the whole class of art students; and perhaps too, we may be able to profit by this comparison and arrive at some useful truths.

Well then, the Paris art student

passes through three periods. First comes the reverential period, reverence for the unbounded faith in several of the accepted masters; also reverence for and faith in one or two of his fellow students who are a little more advanced than he is, but as naturally in this first period he is still very ignorant of all art, the fellow students he admires are chosen more for their volume of voice than for their artistic abilities. Accompanying these characteristics is intense enthusiasm and also *modesty* (he really is modest at one period of his career); he hates to show his work and realizes how bad it is.

The modest, reverential period lasts from six months to two years and the second stage is entered. The hair grows long and free use is made of the lungs. The student idols have fallen—he may be one himself—and the great masters he had set before him have been abandoned for others. A huge tie spreads itself over his bosom, he affects corduroy and lays down the law. As time goes on, these traits become more exaggerated, and if he has had the luck to achieve any little success in the way of selling or exhibiting, his manners become absolutely insufferable. He lounges in graceful positions and courts criticism, but is touchy and will only tolerate it on lines and according to rules prescribed by himself. His productions he values enormously. As yet he is only capable of imitating, but thinks he is original and considers all other conceptions of painting except the one he is enamored with, as driveling rot. Without mentioning it to anyone, he believes his work to be nearly as good as the

best of the day, and confidently expects before long to equal Rembrandt and Titian.

This second stage lasts variously from three years to a lifetime. If he happens to be possessed of means he may never get over it. Its end is usually heralded by the wolf at the door or prolonged neglect of the public or some catastrophe, and then the third phase is entered. The hair grows shorter or is possibly lost, adverse criticism may not be enjoyed, but is listened to and learned from, much thinking is done, and less talking indulged in. Merit is seen in other schools of art beside the single one or two. Self is not taken so seriously. The work improves, and eventually art is achieved.

Do any of you pictorialists in the above description of the Paris student recognize the photographer? If you don't, it is because you have not yet *arrived*.

It is a long road to travel; for twelve, fifteen, eighteen years our muse delights in eluding us, always down the foot of that lane we expect to find her, but when we are there she has gone, just around the next corner, and the next, and so on. But once art is achieved we realize how funny we must have appeared to others. We then understand that our critics saw more clearly than we did, and from that moment prefer the hostile critique, for it is from that that we know we can learn. From a psychological point of view the conceit which art students are so saturated with is very interesting; it beautifully illustrates the all-wise provisions of nature to protect those she loves (for nature loves artists and poets, you

know) from discouragements which otherwise might be too great for them to overcome; and so when the American pictorial photographer cries out that he has been hurt, he is merely telling us that nature, however much or little she may have stunted him in other qualifications, has given him a liberal amount of that conceit so necessary to fortify him on the long road of hardship to the great goal, Art.

Let us now see how the French teachers, who are the greatest of all art teachers on the globe, deal with the student. First, they naturally recognize the necessity of the student possessing a good portion of conceit, but also, and what is far more essential, the student must have that all-important element, *love*. Without a strong love for art, amounting even to a passion, the pupil can do nothing, nothing, nothing except make a fool of himself, bring his art into disrepute and annoy serious workers. *Therefore*: The French teacher begins by discouraging as much as possible with the idea of weeding out those whose incentive to art is *merely vanity*, and with the certain conviction that those who have sufficient love will remain. And this is charity, for the sooner the unfit are set doing something else, the better it is for them. To give just one single example of the method of teaching I am speaking of, but an example that with variations has repeated itself a hundred thousand times in Paris, I will cite the experience a young American had in the atelier of Carolus Durand. The young American, whom I will call X, has today become a famous painter; and Carolus

Durand, as you probably all know, is France's most accomplished portrait painter; the teacher of Sargent; an artist who has risen to being president of the Salon of the Champs de Mars; who also has had all possible honors heaped upon him; a great swell with acknowledgedly beautiful manners, etc., etc. Well, in the days when Durand ran a school X turned up there to seek instruction. X had come straight from America, where his friends all thought him *so* talented, and he wore a huge tie and acted and looked like—but you know, like a semi-idiot. He immediately began painting the full length nude. Criticism day came and Carolus passed his painting by. "What does that mean?" asked X. "That means that you had better only paint the head" his fellow students told him. Therefore a head he painted, but all the instruction the master would essay was a glare at the canvas and a sneering "Bah." "And now, what does this mean?" again queried the crest-fallen X. "Why, this means that you should draw and not paint" was the answer. So X made a drawing from the nude, but when the end of the week brought correction day and with it Carolus Durand, all this great man, famous for his manners did, was to spit on the drawing. "And that?" gasped the now agonized X. "That is a hint to you to give up the life and draw from the antique" came the reply. And in all this Durand was right, for until the violently inflamed condition of X's conceit was cooled down a little, all channels to his reason were closed. And this treatment X to-day admits made him, just as the favorite advice of the French teacher to his pupil to "go and make

shoes" has made many another artist. Now, interestingly, the American woman can rarely learn how to paint well, while her German and French sisters do so far more frequently, and I attribute this solely to the fact that the American woman being largely a hot house product can't stand an honest criticism, whereas the European woman, not being so thoroughl' emancipated, and not having so completely put man in his "proper place," occasionally hears a word of the truth and profits thereby.

But to come back to our American photo pictorialist, has he love?—conceit he has in abundance—but love, a deep strong passion for the art itself, has he that? I am afraid in the enormous majority of cases he has not. I believe that as a very general rule the guiding passion is not love for art, is not an intense desire *to express some feeling or thought*, but is *vanity*. I believe that the satisfaction the true artist feels when he has successfully given birth to an idea, when he has given life to a bit of canvas, *created* just a tiny morsel, is a satisfaction rarely enjoyed by the average pictorial photographer. I believe that the so-called pictorial photographer only gets joy when his work is praised by his friends and the world at large; and I believe further that it makes no difference to him whether he believes his work is deserving this praise or not, and in proof of this last assertion I will again quote from Mr. Ludlow's letter (the letter is very characteristic of his class). He says, "Were I a Strauss or a Steichen my work might be deserving of such criticism. But the critic should remember that

he is dealing with amateurs, and such cutting, severe criticism would discourage rather than spur on the beginner or man of sensitive (sic) make up." Look! Mr. Ludlow wishes to set up two standards of criticism, one for the professional and one for the amateur, the consequence of which would be, that although different things were meant the literary terms used would be the same, and his work and Steichen's would be spoken of just the same way, even if in different parts of the magazine. Further, Mr. Ludlow entirely forgets that photography is the one vocation and the only one (of any importance) in the whole world in which the *amateur excels the professional*. Alfred Stieglitz is an amateur, and so is the discoverer of the glycerine process, Joseph T. Keily; and so are almost without exception the whole body of pictorial leaders. It is from the ranks of the amateurs that the big men come, we place our hope in them (the only hope we have in the great majority of the professionals is that they will drop out of sight and memory as fast as their work).

But if now the critic must do baby talk to satisfy the vanity of a "man (sic) of sensitive make up" all hope is lost. I, too, like Mr. Ludlow "have watched the criticisms" in the AMATEUR PHOTOGRAPHER "very closely for several months" but have, unlike Ludlow, been struck with their great justice and penetration, and the only fault that it ever occurred to me to find was with their mildness.

Let us therefore have the "scurrilous criticism," it is the only kind that will do any good.

SOCIETY NEWS.

Secretaries of Societies, or Camera Clubs who want their meetings reported or who have communications of interest to photographers that they wish to have published should send them direct to Dr. John Nicol, Tioga Centre, N. Y.

Buffalo Camera Club.

The third annual exhibition of pictures by the members of the Buffalo Camera Club held last month eclipsed all previous efforts. We are privileged to reproduce a few of the prints and have before us their catalogue, most tastefully gotten up and a fine specimen of the printers' art. It strikes us, however, that such lavish catalogues are a needless expense and drain upon the resources and energies of club members and their purpose could be equally well filled by a plain and simple catalogue such as the Toronto Camera Club supplied at their last exhibition. The Buffalo Camera Club is now in a flourishing condition with a membership of eighty and comfortable quarters in the new Y. M. C. A. building. The exhibition was well attended, the public interest being shown by the number of pictures purchased, the amount of the sales being over \$150.00. The exhibit was also the cause of a number of new applications for membership. Plans are under consideration for an open Salon next year to which all the best amateurs throughout the country will be invited to send their prints to be passed upon by a competent jury.

Akron, O., Camera Club

The fine new rooms of the Akron Camera Club were formally opened on Tuesday evening, April 18. Appropriate addresses, a musical programme and an informal reception passed a pleasant evening. This club was burned out only recently after having removed to new premises, and that they have risen Phenix like from their ashes and even bettered their former conditions reflects great credit on the enthusiasm and spirit of the membership.

Photographers Association of America

The Quarter Centennial of our Association will, beyond the shadow of a doubt, transcend any meeting of like kind ever

held on this Continent, and you are urged for Art's sake and for the sake of that true comradeship, which is such a delightful incident to artist life, to bring your wares to the show and to shake hands with the best of your fellows.

The show place, the Mechanics' Building, is the best adapted of any structure in the whole country for the purpose of a photographic exhibition. It is indeed a faultless interior and as perfectly suited to our purpose as though it had been built by one of us, for us.

And be assured that the people of Boston, that city deservedly known for near a century as "The Athens of America," know just how to treat the stranger within their gates; and with the first cordial greeting, forever dispels his notion that he is a stranger.

Don't you want to try for the prizes? Don't you want to receive words of kind and just praise in commendation of your work, from men whose praise is indeed an inspiration? Don't you want, in a beautiful and historic city, in one of the noblest structures, to see, to learn, to compare, to grow?

Every detail for the success of the meeting is being carefully wrought out. If you prize your Art and wish to see its best possibilities developed, come to Boston and see, and contribute to the rich stores of the beautiful scenes and faces and forms reproduced from the life of the times in which we live.

Cordially and respectfully,

A. T. PROCTOR, 2d V. P.,
P. A. of A.

Elmira Camera Club.

At the regular monthly meeting of the Elmira Camera Club held April 6, 1905, the members and friends enjoyed a demonstration of the Wrigley Flash Machine recently invented and patented by Garnet P. Wrigley, a member of the club. Several group pictures were taken and all proved a suc-

cess. The chief point of the machine is a simple device which controls the flash, thus giving the operator a chance to get in the picture himself and it also does away with any possible chance of accident. Mr. Wrigley gave a very thorough description of the machine and the tests substantiated his remarks. Mr. Wrigley was warmly congratulated by the spectators on his invention.

Photographic Society of America.

The following items of interest we extract from the *Journal* of the Society:

Mr. Chapman, in reference to a print of his in the Annual Exhibition, showing a yellow sunlight effect, stated that it was produced on regular platinum paper, the picture not being developed until four months after it had been printed. Two drachms of saturated solution of bi-chloride of mercury were added to 8 oz. of the regular platinum developer. No acid bath was used, the print being taken from the developer and placed in water. The iron salts in the paper, by long standing, seemed to become insoluble.

Mr. Abbott, referring to his picture of "The Alhambra," a striking effect in the gum bi-chromate process, said that the picture had been made from an enlarged paper negative of a 4 by 5 snapshot.

Three printings had been necessary to produce this effect. The paper was first coated in the usual way, using Venetian red as a pigment. The picture was then printed and developed. After drying, the paper was again coated, using yellow ochre and orange cadmium as the pigment. It was again printed and developed. After drying, it was finally coated, using a pigment composed of Prussian blue and indigo. It was again printed and developed, giving the final effect. The picture was printed on a drawing-board, care being taken to preserve correct registration. He preferred this method to that of local coloring. While it was more difficult, the result, he thought, was more harmonious. He thought the entire color scheme should be represented, and each color should be influenced by all the others.

Professor R. W. Woods, of the Johns

Hopkins University, gave a most interesting lecture on the subject of "Recent Improvements in Color Photography and the Application of Photography to Scientific Subjects." He explained how color effects were produced by the diffraction process. He showed how a glass screen, ruled with 2000 lines to the inch, placed behind the lens, would divert the red rays of the spectrum. A ruling of 2400 lines to the inch would cause the green rays to be diffracted, while a ruling of 2700 lines to the inch would cause the blue rays to be diverted.

A screen with a combination of these rulings, overlapping, would show not only the original colors, but yellow, purple and various other hues. A combination of the three rulings produced white light. He also exhibited photographs of sound waves and the course of a bullet in its flight through the air, and showed the results of many curious and interesting experiments.

The Camera Club of New York.

On April 7th, Mr. Dunn repeated his lecture given the previous month on "First in Korea and the Beginning of the Russo-Japanese War" to a crowded house with amusing references to curious experiences. He stated he was shortly intending to return to the country again hoping to secure further views.

On Monday evening, April 10th, the slides of Indian subjects were explained for Mr. Edward S. Curtis by Mr. J. C. Abel. For three or four years past Mr. Curtis has been making record photographs among the different tribes of Indians, of their customs, mode of living and sports, in order to obtain a historical record before any particular tribe becomes extinct.

On Tuesday evening, April 11th, the annual meeting of the club was held, presided over by the retiring President, Mr. Fred. E. Ives. About twenty-six members were present. The Treasurer and Secretary made annual reports which were approved.

The nominating committee had adopted a complete ticket which was approved unanimously by the members present. The following were declared elected for one year to April, 1906:

F. Benedict Herzog, President; Malcolm Stuart, Vice-President; E. Lee Ferguson, Secretary; H. T. Leonard, Treasurer; Trustees for one year, Jas. T. Vredenburg, W. P. Little; Trustees for two years, Fred G. Kneer, M. W. Tingley; Trustees for three years, Eduard J. Steichen, M. W. Seaman; Committee on Admission, H. B. Reid, Ed. Heim, H. T. Rowley.

Mr. Ives stated the scientific work planned a year ago was not prosecuted because of the low condition of the finances. He thought some endowment should be made to defray the expense of such experiments. He felt grateful to the members for overlooking any delinquencies in office. He really had not had time from his business to do what he had wanted to for the club.

In accepting the office of President, Mr. F. B. Herzog said as he took the chair that he greatly appreciated the honor of being elected and felt it an honor to succeed Mr. Ives, who was so well known in his work relating to scientific photography. He thought differently from Mr. Ives; that the future of the club must not be despaired of. Photography is said to be near art and certainly will increase as an aid as time goes on. He believed in mutual helpfulness among the various members and workers. A plan where groups of members interested in a particular branch of photography could co-operate together, to perfect themselves and give their results to the club would he imagined promote the welfare of the club generally and imbrue in all a fair degree of co-operation. The immediate future of the club he thought was good. The present members' annual print exhibit he thought augured well for a more harmonious feeling among the various members and a decided improvement in the production of artistic work.

Just before the adjournment, Mr. F. C. Beach exhibited and explained a new portable dark room, the invention of Mr. Hall recently introduced, which could be quickly set up in any convenient place and compactly packed for carrying about.

The accompanying illustrations show the apparatus extended for use and collapsed for packing in an ordinary suit case.

Dark Room in Operation.

It is composed mainly of metallic sheets, each about 12 inches wide by 18 inches long, one forming the bottom, the other the top of the room. Two braces or supports are hinged to the under side of the top sheet. As it is raised from the collapsed condition the braces swing outward and are pushed over elevations at each outer end of the base sheet which locks them in position as the upper part is extended. In one corner of the base sheet is a receptacle for a ruby lantern, having air apertures extended slightly below, and surrounded by a screw ring to prevent light from coming in at the joint. A similar screw ring is shown at the corner of the top to make the joint of the chimney tight. The bottom has small knobs at each corner underneath to allow air to enter at the corner. The top and bottom sheets are connected with a double thickness of light tight material having two elastic enclosed wrist apertures through which the hands are inserted as shown in one illustration. The top sheet has a removable center secured in place by thumb clamps and to this removable portion is secured the view-



Dark Room Collapsed.

ing hood. The latter is so made that it just encircles the eyes above the forehead and below in line with the bridge of the nose, leaving the nostrils free to breathe the usual outside atmosphere.

The hood is held pressed against the forehead by a stout rubber band put over the back of the head.

To operate for changing plates or developing, after the apparatus has been extended, the central hood part is unlocked and removed. The trays or plate holders are then inserted through the opening, the part is replaced and locked, then the hood is applied to the head and the hands inserted in the side openings. The light, usually that of a candle, or a small electric bulb then enables the operator to see inside all the manipulations perfectly, using his hands as freely as if he were in a genuine dark room, without its discomforts.

The apparatus is light, very effective and quickly set up, and can be used in any convenient place. Mr. Beach stated that he had tested it himself and found it quite satisfactory.

It is supposed the falling off in membership reported by the Secretary Mr. J. B. Kerfoot in his annual report was partly due to the advance in dues voted to be made in the summer of 1904. The total losses in active members was 39, the gain was 14 making a net loss of 25. The total number of active members on March 31, 1905, was 132 against 157 March 31, 1904. There is a constant life membership of 20, and 17 honorary members. The present total membership of all kinds is 233.

The Treasurer's annual report by Mr. R. B. Minis shows receipts from entrance fees, annual dues and locker rents to have been \$5,276.10 together with a loan of \$845, and ordinary expenses including rent, services, light, printing, etc., \$1,112.79. The receipts from dues, locker rents and entrance fees was about \$600 less than those of the previous year, which is in effect owing to the unusual withdrawals of active members.

The spring exhibition of members' prints began April 15 and closes May 15th. A review of this exhibit will be given next month.

OUR PORTFOLIO.

Prints for criticism; only one at a time and only once each month; to be sent to Dr. John Nicol, Tioga Centre, N. Y. The coupon found in our advertising pages must be attached to the back of each print.

1933. W. H. HULL.—"Friends" is, so far as technique is concerned, a nearly perfect photograph. A man holding a dog in his arm, and that they are good friends there is no doubt, but the friendship is not in any way shown; both indeed unmistakably being knowingly having their portraits taken and both staring into the camera.

With such models how easy it would have been to make the man look at the dog and the dog look at the man, and what a difference it would have been. As it is it is a very fine photograph, but as it might have been it would have been also a fine picture. The thing lacking is thought. Dog and man staring at the camera with no more action than had they been lay figures,

and so far as your photography goes they are perfect; but with action instead of inaction you would have given life to both.

1934. H. H. HARVEY.—"A Misty Morning." We can make nothing of this as it does, not to us at least, in any degree convey the idea implied in the title. It looks exactly as if, after development of the print, and under development at that, it had been exposed to light long enough to be thoroughly fogged, fogged to such an extent as to make it difficult to make out the image.

1935. W. G. WARNICK.—"A March Snow Scene" has some good and several doubtful qualities. The snow is fairly well rendered, thanks to its depth and the ruts;

we do not fancy it as the work of an amateur. The background hardly escapes being offensive, and the model, well photographed as she is, is almost as stiff as a lay figure, and made all the more so by the way in which her arms are placed behind her. The white cloth round her shoulders and hanging down in front may be characteristic of the time but is fatal from a portrait point of view; attracting the eye as it does and keeping it from the face which ought to be the point of interest.

With such good photography you should do better. Discard the painted background, train the model to action or the revelation of her inner self rather than to stand to be photographed, and arrange your light and shade so as to lead to the face, the objective point, and you will be surprised at the improvement.

1937 E. G. FOUNTAIN.—"The Book-Lover," a girl reading, is a very good example of what is known as "the usual thing" with the average portrait of a second or third class professional photogra-

No. 1935

W. G. Warnick

March Snow Scene

while the shadows play an important part. But we should have liked to have seen their source, a shadow without its cause is something of an anomaly. Then, unfortunately the exposure has been just enough too short and the development enough too long to make sky and snow exactly alike—merely white paper; and it may be taken as a rule that with such a sky there is something seriously wrong with the values. Nor is the composition or arrangement quite what it might have been. The almost equal division of the upper part into three masses, two darks and a light, the latter in the middle gives a mechanical feeling that a different position of the camera would have avoided a little to the right or left making all the difference. When all that is said however the snow scene is better than most that have come to us during the season, and the faults have been pointed out in the hope that you may be able to avoid them in future.

1936. M. A. NORTON.—"Dorothy Vernon" is what would be a good example of the work of a third rate professional photographer painted background and all. But

No. 1937

E. G. Fountain

The Book-Lover

pher. The photography is as nearly perfect as possible and the flesh tints in face and arm are simply admirable. It is refreshing to get a photograph in which both exposure and development have been just right. The only fault we can find is the rope of hair brought over the chest, as it seems out of place and makes one wonder what it is doing there. It is a fine example of the beauty of simplicity, and grows on us the oftener we see it.

1938. F. F. SORNBERGER. — "Monday Morning," two women at the wash tub under the shade of a tree, with what seems a third keeping her eye on them from within the dwelling, is a well arranged bit of *genre* with only one serious fault, a lack of contrast. In appearance it is a sepia toned print without a trace of white, the highest light being but a lightish shade of brown while all the rest is only brown of a darker shade. The composition is fine and the arrangement satisfactory; and it is just possible that with more careful printing or printing on a paper more suitable to the negative it might be made into a really fine picture. The one thing needful

is sufficient contrast, and that we think could have been secured by a slightly different method of lighting.

1939. F. SOLOMON. — "Music," about the half of one girl playing on a piano and the half of another turning the pages is a very unsatisfactory production. It is true that some of our best photographers have occasionally cut their figures to a more or less extent, and in some cases it may be with advantage, but as a rule, they had or thought they had a good reason for it, but it was a mistake nevertheless, and he who tries to follow them, especially when, as in this case, he had no good reason, makes the mistake all the greater. Here both the lighting and the use made of it is at fault; the former being far too flat and the latter much too short, so short indeed that that in spite of a pushed development the piano is simply blackened paper. Nor have you been as careful as good work requires, the page turner, instead of attending to her work, is looking at something beyond, and in the trimming you have shown the piano considerably off the level. You have chosen a difficult phase of photog-

No. 1940

RECREATION

Wm. J. Luckhaupt

No. 1942

Dr. F. E. Weeks

raphy in which you will not succeed until you learn to take much more thought and care than is shown in this.

1940. W. H. LUCKHAUPT.—"Recreation," a man with a pair of horses on the edge of a stream, probably brought there to water, is an excellent example of photography; splendid technique, fine placing, and beautifully contrasted, the one horse being white, the other apparently a bay. This is one of the few examples that come in which exposure and development have been just right, and gives us unusual pleasure. It is well worth enlarging to, say, 20 x 24, when it would be a credit to any parlor.

1941. G. M. BRIGGS.—"Water Tank in Winter." This is the first stereogram that has come to us for years, and it is not the best kind of subject for that interesting phase of photography, nor is the tank placed to best advantage. A stereogram should never have a bare foreground as it then lacks the most essential objects for effect. As it is, however, it is fairly effective, and in the absence of something better will be satisfactory. The tank has evidently been running over with frost intense enough to freeze the water ere it fell, and while it cannot be said to be pictorial or picturesque, it is at least interesting and has been well photographed.

1942. DR. F. E. WEEKS.—This unnamed print was probably intended to be a "landscape with figures," but the figures are so small, about an eighth of an inch in a three and a half by four and a half subject, that they might as well have been left out for all the influence they have. It is a fine subject, however, and except for a little over development, well photographed. And even that might be to a considerable extent overcome by a little shading down so as to lower the tone of the sky rendered little more than white paper by the over development. The composition is in every way satisfactory, and the light behind the trees on the left gives a peculiar charm to the picture. The only fault, and it is a somewhat serious one, is the all too small foreground. The raising of the horizon line by half an inch would have made all the difference, as there does not seem sufficient root space for such large trees, sug-

gesting as it were, a feeling that a stiff wind might cause them to topple over. It is, however, a good picture and seems finer every time we go to it.

1943. J. HARMANUS FISHER.—"Rocks and Stream." This is the print referred to in the letter of our correspondent on another page, and although practically from the same view point is a very decided improvement on its predecessor; an improvement that is from a technical standpoint. There is ample evidence of a sufficient exposure, and also of a too protracted development, development sufficient to give, in the negative, an opaque sky and equal opacity wherever the light has had direct action. A factor, supposing it to have been developed by the factorial method, of about 20 per cent. less would probably have resulted in perfect technique. As it is it is nearly perfect as a record of fact, and with the shorter development would have been altogether so. The other in our next.

1944. MRS. F. RICHARDSON.—"Henderson Pool" is a good subject and from a fine view point, and but for a far too short

No. 1944

Mrs. F. Richardson
Henderson Pool

exposure would have been a fine picture. The short exposure, however, and consequent over development has made everything on which direct light fell, sky, leaves and trunks of the trees simply white paper, the sparks of light from the leaves making white spots as if scattered from a pepper box. A longer exposure, shorter development, and the trimming away of the tree close to the right margin would have made it a really fine picture. We recommend the trimming of the tree from the right because it repeats too closely the margin, which is always a mistake.

1945. A. K. WRIGHT.—"Sunshine and Shadow." We hardly know what to say of this nor what induced you to select it, as although both fence and shadow lead to the two trees they are hardly sufficient as an objective point or subject to make a picture. The photography, however, is good, much better than the selection, and with a more careful study of pictorial art you will do good work. The toning down of the sky has not been so well managed as it might have been, especially that behind the larger tree on the right the contrast between the darkened and the all too white parts being much too great. You should remember that the tree could not be blacker than it is and so toned equally all over, but not to such a dark shade as it is evident that in such sunshine the sky could not be so dark.

1946. G. E. SANDERS.—"The Pool in the Meadow," is a picture after our own heart, a compromise between the fuzzy and the

sharp that the oftener we go to it the better we like it. It is simplicity itself, and yet every time we return to it it suggests new ideas and fresh food for speculation. We can neither find a fault nor suggest an improvement, and only add that it must be viewed at a distance of, say, from two to three feet, to see it at its best.

1947. E. S. BROWNING.—"Heart of the Woods" we can make nothing of. It is simply a conglomeration of foliage with one tree more prominent than the others, but without an idea of anything approaching the pictorial. It has the appearance of a toned bromide print but toned to a very ugly brown, nothing like the much admired sepia at present so fashionable and so easily obtained. In our judgment it is simply a waste of good material, the only thing that can be said in its favor being that it is properly placed, but of material not worth placing.

1948. E. M. HULBERT.—"A Good Spinner," three boys, one with a perie or top spinning in his hand, is natural but not artistic, their heads being almost on a level and a little wanting in contrast. Young as they are, they are made to look still younger by the too large expanse of sky above, an inch and a half trimmed from which is a great improvement. A little trouble taken to arrange the boys in action rather than at rest

No. 1948

F. M. Hulbert
A Good Spinner

as they are would have made a picture of what can hardly be called so now. We cannot conceive boys at rest, it is unnatural; and it would have been so easy to place them in action, one holding his top spinning in his hand as he is, another winding up the string, and the third in one or other of the many positions incident to top spinning. So far as the photography is concerned it is very good, but in picture making that is only one part and the least important part of the work. With the present supply of apparatus and chemicals and the instructions that go with them any one can soon be a good photographer, but to be a picture maker is a very different thing, and that can be reached only by study and care; the acquisition of the power of seeing and the proper application of that power.

1949. J. T. ZUKA.—"Soap Bubbles," a boy and girl at that oldest of childish amusements, the boy holding the pipe while the girl blows; the arrangement indicating more than is shown at the first glance. Even at this youthful phase the superiority of the male is made clear. And the expressions on the faces show how early the true position in nature is taken up; he knows all

about it, and holds the pipe to her mouth while she, in perfect trust in his knowledge, does just as she is told. How true it is that even from childhood we may learn much. The arrangement is good and the photography fair, the only fault being a little too short an exposure and a little too long development, resulting in a harsh or too contrasty figures and surroundings and lack of detail where it would have been of advantage, in the tree behind the figures and the lower part of the boy's dress. On the whole, however, it is better exposed than nine-tenths of all that come to the Portfolio.

1950. CARL KREBS.—"Snow-Clad." The only thing we can say of this is that it is a good photograph of a subject that you would not have thought worth a plate but for the snow, and the snow does not make it any more worthy of being photographed. A few trees scattered around with a stump in the foreground, and all covered with snow, nothing of more importance than another and nothing suggestive of more than is seen, although very well photographed is nothing more than a good photograph of a subject not worth photographing. That at least is our opinion, as we neither see in it anything, nor have we anything to bring to it that can make it more than we say. At the same time we often wonder whether there is in us something wanting in connection with snow scenes. They come to us from time to time, always or almost always of subjects that the authors would never have thought of photographing except for the snow, and we have never been able to see that such covering made them more worthy of the honor conferred on them.

1951. J. A. YOUNG.—"The Path Up The Hill" is so very good that we are almost angry that it is not just a little better. A fine selection from probably the very best point of view, but with sky road, and almost everything on which direct light was falling whiter than ever they were in nature. A little more exposure with its corresponding shorter development would have made all the difference, would have given truer values, the only thing lacking to make this one of the pictures of the season. But

instead of being in front of it. We mention these easily mended faults that you may avoid them in future, as the portrait, with all its faults, gives ample evidence that with a little more care and thought you will do good work.

1953. O. HOLMES.—“Winter” is a good photograph of a subject that you would not have photographed but for the snow, and the appearance of which does not in any way warrant the favor you have bestowed on it. Technically it is good, even the foreground, bare as it is, is good photography, but the narrow strip of landscape up in the all too high horizon line is little more than a line. The perfectly black walls of the building and equally black trees and the very dark sky are not in keeping with the white paper that does duty for snow, all going to show that the exposure has not been such as to give anything like true values. As we have already said, and as we have often said before, snow does not, as a rule, make an unworthy subject a worthy one. With such good photography you should do much better, but it requires more thought than you have given to this.

1954. W. F. SCHMIDT.—“The Northern Side” is too lopsided to appeal to us from

No. 1951

Jas. A. Young

The Path up the Hill.

we go to it again and again, each time liking it better than before, but each time correcting in imagination these faults and so looking at it not so much as it is as what it might have been. You have got the seeing eye and the knowledge of perfect technique, the one thing wanting being the determination to give sufficient exposure to take you very far up the artistic ladder.

1952. FRANCIS W. GRANT.—“Margaret,” a portrait of a little girl, has some good qualities, although with more care a better expression might have been secured and a better position arranged. She seems bunched up, her head pressed down on her chest in a way that is hardly natural, and you have been too ambitious as to size, the lens taking you too near the subject, a third less would give an apparently more natural perspective. And then, the head seems as if pressed into the background

No. 1952

F. W. Grant

Margaret

a pictorial view point, the large mass on the right seeming to need something to support it on the left; and the large foreground without a trace of interest keeps the eye wondering why it is there, and keeps it from the more important objects. Nor is it possible to say whether the foreground is meant to represent snow or water as it is little more than white paper. Whatever it may be, there is too much of it, and the trimming off of an inch would be a decided improvement. A longer exposure and shorter development would have given you something more nearly like nature, a foreground showing what it really is and a sky with natural clouds. An exposure of twice as long as this got, and development in a solution weak in reducer and stopped at the proper time would have made a wonderful difference.

1955. HARRY RUSHTON.—Please in future to attend to the instructions at the head of this column. Of the three unnamed prints we select the best, or rather the least objectionable. As they are not numbered and are practically of the same subject we can only distinguish it by saying that it is the one of medium size and apparently the only one including water. And first, no subject can be worth photographing that consists almost entirely of a series of vertical lines, trees with bare branches, and without one object of more importance than another. It is neither picturesque nor pictorial, and while it might in nature be a pretty scene, as photographed it is little better than a waste of material. So far as the photography is concerned it is fairly good, although the development of the print has been stopped a little too soon. On the whole, however, you have sufficiently mastered technique and before you can make pictures you must study art, learn to see and know subjects of which you can make good pictures.

1956. C. E. PEARCE.—“Meetin’ House Hill” is a fairly good photograph that might have been better. The arrangement is good but would have been better with an inch less foreground and that amount given to the sky, and a longer exposure would have enabled you to stop development before both sky and roadway were much whiter than they should have been. But the mounting

has been so carelessly managed that it could not be engraved if we should have wished so to do, the starch or whatever the mountant was, has been so lumpy that the whole surface of the print is covered with them. Never forget that if mounting, or indeed anything else is worth doing it is worth doing well, that is, the best you can, and there could have been no difficulty in getting rid of the lumps.

1957. E. N. BACKUS.—“Off for a Walk,” a child with a doll perambulator, a nice little photograph that might easily have been a little better. Children never look well when posed on purpose, they should always be allowed to pose themselves, that is, the photographer should watch for the favorable opportunity, and you have not done so but tried to make the opportunity by getting her to stand stiff as a wooden figure. Except, however, for the position the photograph is really good and would have been better if you had stopped the development just a little sooner. Try again and let the child walk about, and talk to her doll, and if you catch her at the right moment you will have a better picture.

1958. M. DOSCHER.—“Portrait” is a fair example of the work of a third rate professional photographer, such as may be seen in the show cases of nine-tenths of what is generally spoken of as country photographers, and which is perfectly satisfactory to the kind of customers they have, although, from our point of view there is little to be said in its favor except that it is a good, very good photograph. The figure is badly placed, so far down as to give it a dumpy appearance, a fault that could be removed by trimming three quarters of an inch from the top of the background. Then, the background is too abrupt in its shading, too black on the one side and too white on the other, although the shading of the face is good. And the figure is too stiff, too evidently standing to be photographed, while the arms in their position repeat each other in a way that is far from artistic.

Your photography is much better than your art, and you should study the latter more, study from the work of the best till you know just what you want, and then train your models till they can help you to get it.

OUR TABLE.

Books for review and apparatus and material for examination and report to be sent to Dr. John Nicol, Tioga Centre, N. Y.

WITH THE CAMERA, the monthly circular from the Illinois College of Photography, brings, as usual, information from almost all over the Union and even from England of former students having established successful studios or having got excellent positions. The engraving department has added a large assortment of those expensive articles, screens, to facilitate its work, and the College Camera Club has held a salon exhibit of their work, the prizes in both classes being awarded to John T. Berry. Great interest is being taken in the approaching State Convention, which is to be held in Effingham on the second, third and fourth of May; when we have no doubt that the College will put its best forward in giving the conventioners a hearty welcome.

* * *

THE PRACTICAL PHOTOGRAPHER, American edition, for February and March, have come since our last notice, and both numbers fully sustain the high ideal of those which have gone before. That for February deals with the making of lantern slides, while that for March gives much valuable information anent pictorial composition, and both leave almost nothing to be desired. As we have said before, American photographers are under a debt of obligation to the Era Publishing Company for the introduction to their notice of this very excellent magazine. Indeed, we may say with all truth that what is not to be learned on both these subjects from the two magazines is hardly worth learning.

* * *

THE SIMPLEX EXPOSURE METER.—From The Knowlton Co. comes this latest of the many aids to correct exposure, and one differing from all others in its method. It is a celluloid card of $3\frac{3}{4} \times 2\frac{1}{2}$, with a series of perforations varying from about 3 f-16 to a small pinhole. Against each perforation there is marked the exposure

and the stop to be used, the largest being 17 minutes with f-16, and the smallest 1-25th of a second with f-22, it being understood, however, that the exposure with one stop being known that for any other is easily calculated. The directions for its use are as follows:

"Look at the object to be photographed through the holes in the Exposure Meter with it held *close* to the eye. Find the *smallest* hole through which the object can be seen *clearly* in the detail of its shadow, commencing with the small holes. It must be seen as clearly with as without the meter. Opposite the holes are figures denoting the stop to be used and the number of seconds or minutes that the object should be exposed. If it is desired to show the detail of the *shadows*, select the *smallest* hole through which they can be seen *clearly*. *Hold the meter close to the eye.*"

Circumstances have prevented our putting it to the test of practical use, and we shall return to it again when we have found the convenient time to test it, and in the meantime, as it costs only twenty-five cents our readers may do so for themselves by sending to the Knowlton Co., Box 91, Woonsocket, R. I.

* * *

STAND DEVELOPMENT for roll films has heretofore been the cherished dream of kodakers and, on seeing it demonstrated, like many other dreams that have been realized, we exclaim "how simple, why did we not think of it before?" As will be seen by our advertising pages this month the Kodak Tank Developer is the latest appliance introduced for eliminating all mechanical effort or drudgery from picture making with the camera. The developing machine came as a blessing, but now the time that was spent in turning the handle of that device can be put to other use such as the making or mounting of prints; truly we are getting very close to the photographers millenium.

COLORPRINTE.—We are informed that Colorprinte, the new pigment paper for making photographs in the colors of Nature, will be ready for the market by the time this reaches our readers. The advance sale has been extraordinarily large and we are asked to say that all orders will be filled in rotation at as early a moment as possible.

Dr. Wilhelm Hesekei, a brother and collaborator of the famous savant, Dr. Adolf Hesekei, is now on his way from Europe to see that Americans are properly instructed in the workings of the new process. Colorprinte, while very simple is of such revolutionary nature that it has been deemed best to have the advice and instruction of one who has been connected with it from its inception, as in anything new it is hardly to be expected that the most perfect results will be secured at the first trial.

The Auto Graflex.

The latest product of the Folmer & Schwing Mfg. Co., and the baby of the Graflex family is the Auto Graflex. While it possesses all the main features of the larger cameras it has some peculiar advantages which must be seen to be fully appreciated. In the Auto Graflex the regular reflecting mirror is supplemented by an additional mirror placed in the top of the hood, enabling the user to hold the camera on a level with the eyes, or at a

lower elevation at pleasure. This additional mirror makes the Auto Graflex practically reversible, as when the camera is turned on its side the image is readily seen on the supplementary mirror; and seen in any position the camera may be held, over the head, under the arm, and pointed backwards or forwards or at right angles. Its value as a detective camera or for street scenes is therefore obvious.

The shutter is an entirely new type of focal plane shutter, scientific in construction and composed of few parts, the curtain being in one long strip, containing apertures from full opening to one-eighth of an inch, permitting instantaneous exposures from one-tenth second to one one-thousandth part of a second. Time exposures of any duration may also be made, the change from time to instantaneous exposures being effected instantly. The shutter is set for any exposure by one-half turn of the winding key, all adjustments being made from the outside of the camera, dials plainly marked indicating tension and aperture.

The Auto Graflex is made in one size only, $3\frac{1}{4} \times 4\frac{1}{4}$, and the material and workmanship is the best that can be produced. This necessarily makes the price much above that of the ordinary camera, but price is to some no object so long as they get what they want. To those who want a perfect instrument, compact and equal to all emergencies, we would say, see the Auto Graflex. The negatives are just the right size for lantern slides by contact and if rightly handled it will yield negatives perfect in detail and depth of focus that can be enlarged to any size. The Graflex cameras are manufactured by the Folmer & Schwing Mfg Co., 407 Broome St., New York, and stocked by all the leading dealers.

The Lumiere Products.

From all sources we hear good accounts of the plates now being manufactured in this country by The Lumiere N. A. Co. (Limited). The Lumiere non-halation plate is certainly all that its name implies. The most trying tests failed to produce halation, and if the non-actinic dye between the film and the glass could only be made to dissolve away in the hypo bath,

instead of requiring a separate operation, we would say that this plate would become immensely popular for landscapes and interiors. A test of the Lumiere lantern slide plate shows excellent quality and fine grain. This fineness of grain is noticeable in all the Lumiere plates and is a quality that should alone recommend

them for many purposes. The tests we made were developed both with the metol-hydro and diamidophenol developers. The latter developer is very similar to amidol, requiring only sulphite as the accelerator and it possesses some features which will make it worthy of more detailed mention in another number.

LETTERS TO THE EDITORS.

"Our Portfolio" Criticisms.

Baltimore, March 22, 1905.

Dear Sirs:—

I have carefully read in turn the article on the Portfolio in February number, and the letter of Mr. Ludlow in the March number, and ask myself if the Portfolio has been in any way beneficial to me; and the answer is an emphatic Yes.

In the May, 1904, number I was criticised, "roasted," you may say, if you so desire, in the matter of a print sent, called No. 1754, but not considered of enough merit to justify its reproduction. This criticism, far from angering me, was accepted with thanks at the time, and I have remained thankful ever since. Its effect was to beget determination to overcome the defect, the main one, that of under-exposure and, whilst I have more to learn, I have most unquestionably done better work since. When I sent the print in question it was one which satisfied me, but would not now. Following the criticism I determined to reproduce the identical view, one which is within easy access of my home, and, although it was stated to be non-pictorial in the former instance, and cannot have improved in that respect, desire to present it again in I hope an improved state—as a photograph—so have sent the print by this mail.

Yours truly,

J. HARMANUS FISHER.

[This is one of the many similar communications that have come to us as a result of the Ludlow letter in our March number, and we print it because in "Our Portfolio," on another page, we have ample

evidence of the benefit derived from criticism that, according to our correspondent, might be described as "roasted."

We want to say again what we have often said before, that "Our Portfolio" is not intended to be a medium of laudation as some seem to suppose, or in their ignorance expect to make it; but more in the nature of a school in which the exercises of the pupils are corrected, the faults pointed out, and suggestions given as to their avoidance. Eds.]

WAKEMAN, O., March 26, 1905.

DEAR SIR: Your reply to Chas. R. Ludlow in the March number of the AMERICAN AMATEUR PHOTOGRAPHER moves me to express some of my thoughts. I have no doubt that dozens of persons (myself among the number) who have sent prints for criticism have felt as Mr. Ludlow does. I dispense many a dose of bitter medicine, but do not do it for the pleasure of dealing out the bitter dose, but for the good I expect it will do the sick person. If a person cannot profit by the criticism, he would better keep his prints at home and take pleasure in the praises of those who do not know what a good picture should contain. I am not going to be driven away by your criticisms of my work, but will continue to send prints, even if I do not reach a high standard of work.

Here are some suggestions for amateurs who do not care to spend much money for apparatus. For my fixing box, I took a gallon butter crock, one of the tall kind, and made a box without a bottom, just the right size to slip into the crock. The box is taller than a 4 x 5 plate and has eight

grooves on opposite sides, with cleats at the bottom to hold the plates. It can be wedged into the crock so as not to float up. I make a couple of gallons of the acid, chrome alum fixing solution and fill the crock high enough to cover the plates, but not to the top of the box. In putting in the plates I remember how many I have in and then count the grooves to put the plates in the right place. The cleats keep the plates from the bottom so as to be above the sediment. The solution can be used for months with no attention except decanting or filtering occasionally.

For washing, I made a similar box holding ten plates, but arranged with a piece of wire passing through staples above the plates. When the box is full of plates (I add worthless negatives to make up the number when needed) it will float just at the top of a pail of water, with the plates in a vertical position. The hypo, being heavier than water, sinks to the bottom and the plates are about as well washed as they would be in running water, by changing the water several times within an hour or two. This suggestion is for those who do not have hydrant water.

I am sending you some prints in another letter.

Respectfully,
F. E. WEEKS, M.D.

GENTLEMEN: As I (and I presume a large percentage of your readers) subscribe to the AMERICAN AMATEUR PHOTOGRAPHER on account of the "Portfolio," I trust you will not let such letters as the one you print from Chas. R. Ludlow cause you to make any change in your manner of criticising the prints sent in.

Although I have never sent a picture to the "Portfolio," I have not only derived great benefit from reading it but have "been led out of darkness into the light," and prints that I would at one time have considered pictures, now never get beyond the "proof" stage.

If a man does not want his picture criticised he should not send it in. Any of his friends will praise it for him and if he is "of a sensitive make up" he will not run any risk of having his feelings hurt. Trusting that I may be able to receive further benefits from the "Portfolio," and

that you will still be able to continue the publication even should Mr. Ludlow fail to renew his subscription, I beg to remain.

Faithfully yours,

R. BAILY CARSON.

[Letters such as that which has brought out this stimulate rather than discourage; and is inspiring. Those we print and many more for which we cannot spare space, show us that "Our Portfolio" is doing more good and is more highly appreciated than we had ventured to suppose. We shall therefore continue to apply the knife as well as the soothing draught as before. Eds.]

The First American Salon.

DEAR SIR: I am a subscriber to the AMERICAN AMATEUR PHOTOGRAPHER, and value the magazine highly, but I do regret exceedingly its attitude towards the First American Salon.

Now, although a member of the Salon Club of America and an exhibitor at the Salon, I have been trying to view the whole matter in a fair and impartial way, and am perfectly willing to admit that in the management of this exhibit many mistakes were made, but we must consider that this Salon was the *first*; that no one knew or could possibly know of the vast number of pictures that would be received and that the management would be overwhelmed with over 9,000 frames; it was too late to make adequate provision for these, the management was compelled to act quickly and do the best they could.

But what of the result? that's the main point. In the Clausen galleries in New York the pictures were (on account of the restricted space) not hung to the best advantage and the exhibit suffered in consequence. I afterward saw the exhibit in Pittsburgh and Chicago, where it was well hung and not crowded and, pictorially, it was a great success.

This movement of the Federation of Photographic Societies is of great importance, as is proved by the antagonism it has aroused. It should be criticised, of course, when it needs it; but it should be encouraged and helped by every one interested in the advancement of photography. Be a little generous to a movement *right at the start*, when many mistakes are inevitable.

I am glad the Photo-Seccession has not joined in simply because the rivalry of two separate organizations will be stimulating and good for the cause, but it should by all means be a good natured contest over principles, *and not a personal matter at all*.

I regret any decrying or abuse of the Photo-Seccession; their greatness is universally acknowledged and deserved; they have done and are doing a great work and I hope will have continued prosperity and success. A fair, impartial attitude on the part of the photographic magazines will do more than anything else toward promoting a proper feeling between these two organizations. The attitude of the AMATEUR PHOTOGRAPHER has been decidedly antagonistic (perhaps unintentionally so) to the First Salon and I simply want to plead with you to take a higher stand, entirely above photographic politics.

Sincerely yours,

JOHN CHISLETT.

[As it is possible that others may have fallen into the same mistake that has misled our correspondent we print his letter as an opportunity of putting him and others right. So far from being antagonistic to

the Photographic Federation and the First American Salon, one of the two editors of the A. A. P. appeared and acted as the representative of one of the federated societies, and even before the salon was opened we commissioned one of the Salon Committee to write an account of it; and although that was not altogether favorable, the fault finding was his and not ours. We have had at heart the advancement of photography too long to belittle any scheme for its promotion, so long as it is honestly managed; but that does not prevent, indeed it ought to demand the noticing of mistakes or errors with a view to their prevention in the future. If our correspondent refers to the letter of Mr. Rubincam, he should have noticed that while we gladly admit the views on both sides of questions touching photography, we do not hold ourselves responsible for either although it is only by and through the freedom of discussion that perfection in any movement can come. There is room enough for all classes of workers and all shades of opinion, and so long as the former are free from self-seeking and believe in laboring for love, their love's labor will not be lost. Eds.]

ANSWERS TO CORRESPONDENTS.

Questions for answers, matter for publications, and all communications to the editors should be sent to Dr. John Nicol, Tioga Centre, N. Y.

Exposure and Development

WALTER F. SCHMIDT:—(1) The too short exposure leads to a too protracted development which buries whatever clouds may have been in the sky. An exposure sufficient for the shadows—in the case of the print in question, for the trees and indeed the whole of the foliage on the bank, and development only sufficient to bring out the lights of the foreground and sky might have been sufficient to make it just as it should be; but even then the delicate clouds might have been buried; and in that case they could easily have been brought to light by local reduction with Farmer's solution on a tuft of cotton. (2) You don't say

what is the size of your camera, but on the supposition that it is 4 x 5 the six and a half inch is too short for the best effect, and the draw of the bellows being eleven inches, an eight or even nine inch lens would make a wonderful difference.

Books of Reference

FRANK RIDGEWAY:—The book that best answers your description, "that contains the largest amount of photographic information in the smallest compass," so far as we know, is *Figures, Facts and Formulae of Photography*, to be got from our publishers. It will be found to contain almost everything a photographer need to know.

Ortol Formula

HARRY RUSHTON:—Ortol answers very well for the development of paper and the following formula will be found suitable for most brands:

Ortol	30 grains
Sodium carbonate.....	100 "
Sodium sulphite.....	150 "
Potassium bromide.....	10 "
Water	10 ounces

The quantity of bromide is somewhat indefinite, as it depends much on the nature of the water employed. Too much bromide tends to a greenish black which is easily recognised, and too little tends to a slight fogging of the lights.

MRS. F. RICHARDSON:—Your second print received but cannot be noticed as you have not attended to the notice at the head of this column. We may retain it, however, and notice it in June.

Lighting the Screen.

C. C. CLUB:—With electric light it is quite possible to get a brilliant disc 15 feet in diameter at a distance from the screen of 60 feet. For that purpose, however, you will require a lens of 12 inch focus, and if you can find an old portrait lens of that focus it will answer admirably, and they are often to be picked up second hand for a small sum.

A Common Error

(MRS.) R. L. FISH:—Your chemist is hardly up to date in his knowledge, and has given you the yellow prussiate instead of the red, the ferrocyanide instead of the ferricyanide. The former is in dullish yellow, rather large crystals; the latter in bright ruby red, and generally smallish crystals, and if covered with a brownish dust should be washed before use. Your formula is all right.

Insufficient Fixing

MARTHA GILMOUR:—The yellow stain, deeper at one corner than at the others, and that came only after trying to print the negative is a result of insufficient fixing, and we know of nothing that will remove it without also destroying the image. Your friend was wrong in telling you to remove

the negative from the fixing solution as soon as the creamy white appearance had gone. There was still in the film a salt of hypo and silver that could only be removed by a longer action of the hypo. A good rule is to leave the negative in the fixing bath half as long after the white has disappeared as it took to make it go.

ALFRED SUTHERLAND:—"Formula and full instructions" for the production of three-color lantern-slides to be of practical use would occupy a whole number instead of a portion of this page, and you will find what you want better than we could write it in *Photo-Miniature* No. 38, price 25 cents, to be got from most dealers or Tennant & Ward, New York. Probably the best book on color photography generally is *A Hand Book of Photography in Colors*, by Bolas, Tallent & Senior, price \$2. Tennant & Ward send out a pretty extensive list of books on photography, a postal will bring it.

N. C. Film keeps as well as plates

MISSES M. AND J. MARSHALL:—The films will keep perfectly during your proposed two months tour for development at home; but never forget that sufficient exposure is the basis, we might say the one thing needful in good photography, and to make sure of that we would advise your taking with you a developing machine and developing a roll now and then. As you propose to make two exposures on each subject, twelve dozen spools will not be too much, and although we quite agree with you as to "messiness" of even the developing machine in a hotel bedroom, certainty as to correct exposure is worth the small amount of trouble we suggest.

All Developers are Good

S. M. CARTER:—There is no "best developer." Until you know more than you do about developers and their components you should stick to that recommended by the maker of the plate you use, only it may be advisable to go slow, and for that purpose to dilute it with a third or a half as much water. Yes, we have faith in the developing machine, and whenever we have a strip of film to develop we should not think of developing it in any other way.

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THE PHYSIOLOGICAL BASES OF ART.

By G. W. ALLYN, M. D.

The varied and practical uses made of photography within the last few years have been simply marvelous. Photography has been utilized by every important industry, has completely changed whole fields of work, and the end of its application is not yet in sight.

This substantial appreciation of photography should be especially gratifying to the serious amateur who has chosen it as his favorite side study. As a rule the zeal and industry of our amateur has kept pace with this progress in technical photography; but for some reason he has not fully realized upon its artistic and pictorial possibilities. He has industriously tested new apparatus, new chemicals and new methods; but continues to make pictures which violate most of the simple principles of artistic composition. Why this should be is difficult to understand, for much has been written upon the subject and the laws have been stated over and over again. It is just possible that the *ex cathedra* statement of these laws of pictorial

composition, without their demonstrations and reasons, failed to sufficiently impress our amateur with the fact, that they were not simply formulæ which could be changed by caprice or fancy, but were physiological moods of mind which have resulted from the uses of our special senses during ages and ages of their organic evolution. In this article then it is proposed to study a few of the simplest laws of artistic composition and to explain their physiological *raison d'être*. Artistic impulses though extremely simple must have co-existed with man's earliest use of his special senses.

A most remarkable confirmation of this is the fact that the earliest evidence of intelligent man upon the earth is a *picture* of a hairy mammoth carved upon ivory at the close of the Ice Age, twenty-five thousand or more years ago.

The special organs with which we are concerned and which enable us to perceive and appreciate *color* and *projected form* and to interpret their

agreeable and disagreeable effects upon our minds are our eyes. Now in art so far as *color* and *form* are concerned (the beautiful) those things are artistic which are pleasant and those things are pleasant which are *easily seen*.

The incessant and varied movements of our eyes depend upon muscular activity and much of this study must relate to the physiology of muscular tissue. Long or exacting work thrown upon a muscle soon exhausts it, and discomfort results; while moderate exercise shifted from muscle to muscle or from bundle to bundle becomes pleasurable. Our hearts rest about ten hours a day. In all muscular movement there is an inherent tendency to work along lines of least resistance. The work naturally thrown upon the eye muscle is most exacting and if the effort is too great or too prolonged may cause intense headache and structural disease.

THE MUSCULAR SYSTEM OF OUR EYES.

To secure the movements of our eyes necessary to clear vision sixteen small muscles are brought into constant use. Twelve of these are attached to the exterior of the eye ball and four very complicated ones are within the globe.

Figures 1 and 2 illustrate the positions of the eight recti or straight muscles, drawn diagrammatically as seen from behind.

To see an object distinctly with *one* eye requires the conjoint action of all its muscles in an extremely fine adjustment of fixation. Just how exacting this adjustment is can be shown by a drawing, (Fig. 3). Here (a) the *yellow spot*, (b) the center of the lens and (c) the object to be

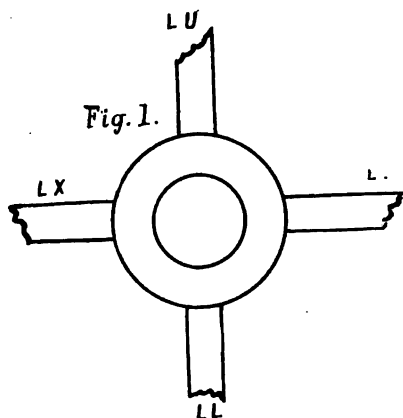


FIG. 1.—LEFT EYE.—LX, Left external rectus. LU, Left superior rectus. LL, Left inferior rectus. LI, Left internal rectus.

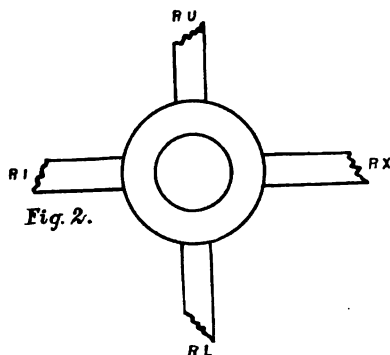


FIG. 2.—RIGHT EYE.—RX, Right external rectus. RU, Right superior rectus. RL, Right inferior rectus. RI, Right internal rectus.

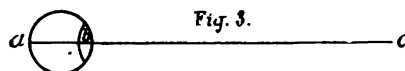


FIG. 3.—a, Yellow spot. b, center of lens. c, object viewed.

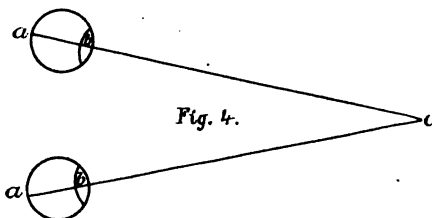


FIG. 4.—Figure showing the convergence of two eyes — a, yellow spots. b, center of lens. c, object seen clearly.

seen must be put upon one and the same straight line and held there.

The spot of distinct vision is but

one-quarter of an inch in diameter when seen at twenty feet.

When such an object is seen with both eyes they must fix on the same spot by the turning in of both eyes or convergence.

With these elementary notions of the structure of our eyes let us study them in action. What follows is simply direction for experiments, which, to be appreciated, must be worked out upon our own eyes. Human nature is so uniform that the results must be absolutely similar.

MOTION ALONG A HORIZONTAL STRAIGHT LINE.

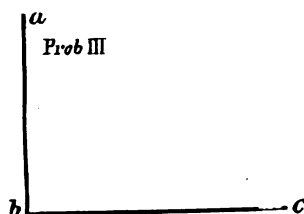
Problem I: Fix and converge both yellow spots upon the dotted line at

a .. *Prob I* *b*

(a) and follow toward (b) carefully enough to count accurately the dots. The eyes will arrive at (b) fagged and with no sensation of pleasure, for the reason that the motion along this line has been made by two muscles, (R X and L I) only, and without relaxation.

a MOTION ALONG A VERTICAL STRAIGHT LINE.
Prob II Problem II: Here we have a similar condition to Problem I, but the work is thrown upon the lower muscles R L and L L.
b THE RIGHT ANGLE.

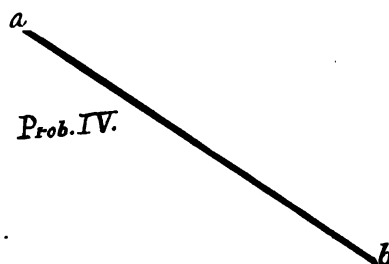
Problem III: The most inartistic form made of simple lines is the Right Angle. It combines the difficulties of the horizontal and the vertical lines of problems I and II; and, also, a difficulty in turning the direction at the apex which is most irritating. The



motion from (a) to (b) must be instantly and abruptly arrested and the working impulse transferred from the inferior recti to the muscles which draw the eyes toward the right. This effort is so distracting that the fixation point takes up the horizontal line with the greatest difficulty. So troublesome is this recovery of equilibrium that the head tends to turn to give needed relief. No wonder such a difficult performance should be regarded as inartistic.

INCLINED STRAIGHT LINES.

Problem IV: Inclined straight lines are much more easily followed than horizontal and vertical ones. They

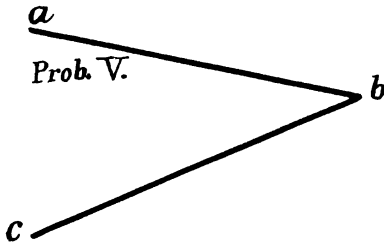


are in the constant grasp of four muscles, the bundles of which are constantly refreshed by new blood, owing to the progressive change in the direction of the pull. From (a) to (b) various bundles of R X and L I pull toward the right and in the same restful manner R L and L L pull downward. This motion is along the

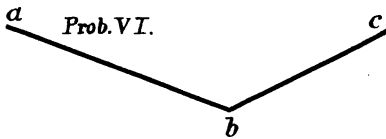
line of least resistance—is a resultant of two forces and is as artistic as straight lines can be.

THE ACUTE ANGLE.

Problem V: The acute angle is formed by the meeting of two inclined lines. There is a reversal of



direction at the apex which possesses artistic interest. The pull downward is never released by the inferior recti. The gradual approach of the lines, as it were a diminuendo, toward the apex gives early notice to the eyes of the proposed reversal which is a snappy muscular performance recognized and used in art to convey this same impression. Recall the sharp spires of a cathedral.

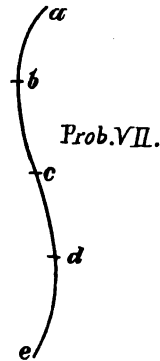


THE OBLIQUE ANGLE.

Problem VI: Here four muscles hold the movements firmly. The line approaches an inclined straight line with only variety or release at the angle. This change in direction must be made slowly, and to the eye the journey has been monotonous and without event. In practice the oblique angle is introduced to convey just these sentiments. Note valleys between low hills or mountains.

CURVED LINES.

In general curved lines are artistic because they are followed with the greatest ease and satisfaction; work and rest follow so systematically that their observation becomes true recreation. Let us illustrate by using



HOGARTH'S LINE OF BEAUTY.

Problem VII: In passing from (a) to (e) the inferior recti are at work the whole distance; but owing to the change of direction the work is passed from bundle to bundle. The muscles causing the curvature are alternately at work and in repose. From (a) to (b) L X and R I or various bundles of the same are at work. From (b) to (d) R X and L I take up the work which gracefully drifts the curve toward the right, then L X and R I having had repose complete the curve to the left.

OUTLINES OF MASSES.

These deductions from our study of lines apply equally well to the *outlines* and shapes of masses, but time will not permit of their discussion and we pass to

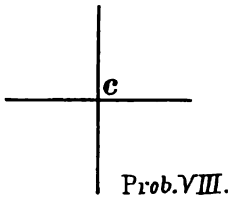
BALANCE.

Balance implies two forces acting over a fulcrum. This fulcrum is near

the center of the picture-space—at the crossing of the two diagonals. To place the chief object at this center is regarded as inartistic and weak. Why?

THE OBJECT OF GREATEST INTEREST AT
THE CENTER OF THE PICTURE
SPACE.

Problem VIII: Upon this symmetrically placed object (c) the eyes



Prob. VIII.

are quickly focussed and as it were fastened, for, it being central and single, the eye gets no rest by excursions to lesser objects. During this monotonous fixation there results a second form of strain and discomfort. To converge with two eyes upon this unsupported figure there is at once experienced a sense of uncertain and difficult equilibrium. Not only are all of the recti muscles made and held tense, but the *oblique muscles* are now called upon to compensate for the slightest mal-position of our head. To relieve this distraction we must take our eyes from the picture. This irksome vision, as will appear in our next problem, is easily relieved and made pleasant. Let there be ever so small a speck of distance or sky and everything is changed, for we now have a

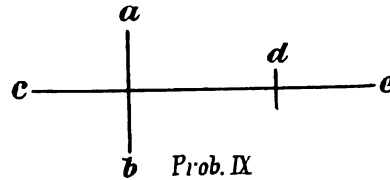
RESTFUL ARTISTIC BALANCE.

Mr. Henry R. Poore in "Pictorial Composition" likens pictorial balance to that of a steel-yard having a short arm with a heavy load and a long arm

with a light one, balancing over the center of the picture as a fulcrum.

PRINCIPAL AND SUBORDINATE OBJECTS
COMPLIMENTING EACH OTHER
ACROSS THE PICTORIAL
FULCRUM.

Problem IX: Agreeable lines and masses lead the eye to the principal object of interest (a b) at once. The



eyes examine this and soon make an excursion to (d) getting by this movement pleasant relaxation. By a series of minor objects the eye may return to a b completing a circular journey, or after visiting (d) may pass out of the picture through a natural exit such as the point of extreme distance. The two objects upon opposite sides of the fulcrum must not be of equal value and *compete* for attention. If equal in size or importance the pictorial journey through the picture is arrested, and the eyes simply fly between the objects in an effort of *judgment* as to which is really the stronger.

The same *confusion* arises when two paths lead through a picture—the eyes hesitate to take either. The usual remedy is to cut the picture into two giving a road to each.

An expansion of this problem explains the distraction experienced when we look upon a picture flecked with white and black. The eyes flit from spot to spot without method, without curvilinear motion, and without rest. The last case illustrates also fatigue to the whole retina. A familiar example of this discomfort is seen

in passing rapidly by a picket fence where the sun is shining through. It is simply unbearable, though no effort is made to see, the light entering the eyeball chopped up. Reference to the retina leads us naturally to the subject of

CHIARO-OSCURO.

In man's effort at seeing, the light which impresses the retina exhausts a fluid called the *visual purple*. This *visual purple* is necessary to vision. Snow-blind is a case of its complete temporary exhaustion. It is being constantly renewed by closing the eyes, by going into the dark or the same thing by looking upon a dark surface. The application of the principle is simple. To inspect alternate masses of black and white gives natural and pleasant effects to the retina.

Problem X: Test the eyes upon a flecked picture, and then upon a picture with broad masses of black and white.

PERSPECTIVE-LINEAR, AERIAL.

The taking of a building in artistic *linear perspective* is to take it from such a position as to introduce the greatest variety and numbers of *inclined* lines. The early problems in this study explain the whole subject.

Aerial perspective is quite another matter, and must have a fuller explanation. Reference has been made to a complicated muscle inside of the globe of each eye. It is called the muscle of accommodation and enables us to see print at twelve inches and in an instant to see a mountain peak hundreds of miles away. In a healthy eye this muscle is in incessant action and rest. In normal vision this muscle is *at rest* when looking into extreme dis-

tance and *at work* upon all objects nearer the observer. In looking at a landscape the eye after viewing near objects instinctively tends to this most distant exit as a means of securing its relaxation. Surely it is not to see objects clearly that vision goes to this hazy indistinct point. This distance point in the evolution of the eye has become a haven of rest, the greatest the eye can have while open.

The *representation* by a picture of aerial perspective or *focal rest* is comparatively modern, but the mind trained during the ages accepts the deception as though the picture were a reality.

It seems quite unnecessary to remark that this discussion does not include what you bring to a picture in the way of memories which a scene recalls, or suggestions of noted historical monuments. These sentiments were already in the mind and were simply recalled.

Photography is practically monochromatic, and the interesting subject of color is excluded from this paper; but its harmonies, tones, and values are all dependent and explainable upon physiological grounds. A colorist color-blind to red-green is unthinkable.

The ear interprets molecular vibration between sixteen and forty-eight thousand per second; and whether a series of these tones make noise or music depends absolutely upon mathematical relations. It was not intended to make this paper controversial and but one question will be answered in advance.

Some critic not convinced of all that has been advanced may say "These impressions are moods of the mind and not of the eyes." To this we would

answer: the modern teachings in physiology regard the eyes as most important *prolongations* of the brain; and, when we consider its wonderful specialization, it is not asking too much to claim that the eyes are as capable of doing the work assigned to them as some deeply buried convolution within the skull. Why not? It is exactly the same kind of tissue. Early in the embryology of the brain two comparatively large lobes of true brain-tissues are projected forward from the mass of the forebrain and

take up places as look-outs in most commanding positions. The eyes are true brains which interpret what is visible in the world in front of them, and our understanding of the external visible world is just what our eyes have interpreted for us.

No effort has been made in this paper to cover the entire field nor to exhaust any one topic; but to open the field for self-study. If the facts demonstrated here were observed in picture-making many common faults of composition would be avoided.

ORIGINALITY.

"THE POWER OF PRODUCING NEW CONCEPTIONS."

BY "CLUNY."

THE one word in the definition of the subject of this article and which forms the difficult task for its illustration in any line of work is *new* and yet may a person not be original and still not be the only one whose work is of this or that particular style? Is it not possible for two minds, or even more, to run in the same channel, especially when the temperaments are so similar and contained in the same realms of appreciation?

It is not with an inventor that we are to be compared whose mind runs along the scientific principles of steam, electricity or the powers of gases, nor is it with the writer that we are to be classed and compared, even though our work may resemble strongly a certain person's writings; our feelings being so deeply affected by his works that he seems to permeate our conceptions and still people would not know

that we were "copying" and yet would we not be just as much as though we were copying from a brother painter or any other artist, whatever be his medium?

It seems a term that is used wrongly and rather too much. Everybody says, "Be original." Do they know what "To be original" means? Do they realize that such a thing is absolutely impossible? Yes, impossible. Why? Simply because we are what we are only as a result of our association with the world, with other people. We, as artists, have spent years in the study of the old masters. We have decided upon the powers of one and the strength of another's composition perhaps, another's color, another's technique. What then the result? We go on collecting a little from one, a little more from another and still a little something from the third, fourth, fifth, etc., etc. We are steal-

ing, if you please to call it so. Just as much as though our work resembles the work of somebody else. For it is but mental material which, after being moulded by our individuality and temperament, will be turned out as "original." We are simply finding ourselves, we are collecting and combining those forces that most appeal to us and either strongly or weakly are arranging our future successes or failures or both.

"Now we must be original." "Do not copy." One as strongly as the next says, "Yes, it is for that above all for which we should strive." Who could deny it? Not anybody. It was my opportunity to once talk with an artist who talked in this way. I found him opposed to the camera as a means of artistic expression, even carrying it to the extent that it was impossible to express ideals with a mechanical contrivance and as we drifted on he stated still further, unknowingly, his mental scope and artistic limitations, soon giving me the old advice "to be original," "to do something new." I realize that I would and do aspire to originality as quickly as anybody could or to that extent that we are able. Did he think far enough? Was he not a bit narrow? "We cannot get an artistic production from a mechanical contrivance," he said. What about getting originality when our entire life has been spent in copying?

Just a step aside to the person whose mind and cleverness turns to invention. An illustration from my own acquaintance. A young man, fond of horses and of an inventive turn of mind, worked and succeeded in completing, an improved carriage nut which would do away with wash-

ers and the wear of the axle. He was about to apply for a patent when he found that a person living but a few miles away had completed an identical copy without ever having even known of the existence of this other person. He proved the more prompt, obtained the patent and realized ten thousand dollars for his efforts. Which was original, the one or the other? Not either, but both. For it took as high a quality of mind for each. This illustration would seem but one of thousands did we but apply to the patent department of the United States government, for it is proved there by hundreds who but come to the same identical results. Should it be more possible or probable there than in art?

Wherein, then, does the difference come? A murder is not a murder unless the motive was murderous and intentional and if the motive was such it is a murder whether or not ever completed. 'Tis the motive that tells. But when the weaker artist sees the work of a stronger and turns away, saying to himself, "I know where there is a place just like that and will go and make one that will be as good and my name will rest up there with his." Of course it will not! How weak it will appear beside the "original"! Why? Because there are subtle qualities in the former that the latter could not ever realize, qualities far beyond his conception and consequently he *cannot* "copy," for to copy takes an artist and an artist *will not* copy. Should the work of an artist resemble that of another it is doubtless honest and should merit praise, for later he will wander to heights by himself. When a person is beginning to be criticised, then is he beginning

to become great. Every possible force will be brought against the young worker, but he will stand and conquer. Simply with that force in him which has placed him capable of criticism.

Are there any originalists then? Yes, but only a select few. Stages of advancement come with slow and measured tread. One thing leading on to the next and step by step the finished whole is placed before the world. A credit to many, seldom to one. The general gets the credit at the close of a hard fought battle. His name passes from newspaper to magazine and down through the years of centuries, but were not the brave soldiers decidedly present, filled with man's bravery and noble patriotism? Uncrowned heroes who have fought nobly but pass from memory, more beautiful, perhaps, 'by the dint of their very unconsciousness.'

"Be original." We will always hear that cry. Yes, and we will obey, but first realizing the tremendous task. The masterpieces of Shakespeare, or, if you wish to believe it, Francis Bacon, are not original, for there were masters before them who

lived to mould and influence their output. Thomas A. Edison is not the originator of talking wood and iron, though perhaps wood and iron would never have spoken had it not been for this genius, nor would it have spoken now had this genius been alone. The imposing steel-clad man-of-war is but an outcome of Fulton's paddle-wheel scow. The world record engine number 999 is but the finished product, completed step by step, from the immediate follower of the stage-coach. Raphael, Rubens, Rembrandt were copyists, for they painted the eyes elongated and introduced perspective only after the way had been shown by those, "original," before them. The great masters in photography are far more than less original, for they have stepped outside of the century-worn rut and are bravely doing something "new" and yet they are not alone; the skilled optician, with his wonderful collection of lenses, making it possible for broad scope of selection to fit all subjects, the plate manufacturer, the favorite platinum—it all depends upon somebody else. Where, then, our originality?

HONORING PICTORIAL PHOTOGRAPHY.

Pictorial photographers will be glad to know that for the first time in its history the mother of all photographic societies, The Royal Photographic Society of Great Britain, has recognized and honored Pictorial Photography, and at the same time, in our opinion at least, honored itself in electing to Honorary Fellowship the man who almost by one consent is admitted to be its foremost exponent in America, Mr. Alfred Stieglitz.

Although this, no mean distinction, and made all the greater by its rarity, has been confined to those dealing with the scientific phase of photography; naturally so perhaps, as the technical must precede the pictorial; and those who best know Mr. Stieglitz as a man and as a pictorial photographer will most highly appreciate the fact that he is the first on the Royal's pictorial roll of honor.

THE "COMPENSATOR" NEGATIVE.

The Photogram is enthusiastic, and not without reason, over the latest of, not "improving" the negative, but of a dodge by which very much improved negatives may be made. It is the invention of Newton Gibson who has already attracted considerable attention through his "candle-light" studies; the object of the "compensator" negative being the curing of halation and the controlling of great contrasts, and that it does so in a most marvellous degree is abundantly shown by the series of illustrations reproduced by *The Photogram*.

How the compensator is produced and used in the production of the improved negative is briefly told in the words of the deviser of the method which are as follows: "First expose a plate which gives clear glass for the shadows, with the glass side towards the lens, giving a very short exposure for the lights only. Develop, fix, and dry, then put back again into the dark slide, to the same place as before, with another (unexposed) plate, film sides together, and give a full exposure for the shadows. If the first negative be of the right density, the second will develop in beautiful gradation, and with a good stereoscopic effect."

Commenting on this *The Photogram* goes on to say "the method is so simple,—almost so obvious,—that we expect many of our readers to say at once "Oh! that's an old dodge." But is it? We have no recollection of such a suggestion being published or of examples being shown; though the ad-

vantage of compensation cover-glasses has long been known in lantern-slide work; compensating methods of softening contrasts have been used with existing negatives; and there is a method of preventing halation in extremely difficult cases, by suspending masks in front of the lens, in such positions as to cover the brilliantly lighted windows.

In carrying out the method there are few precautions to observe. Firstly, it must be possible to remove a plate from the camera, and to return it, after development, to *exactly* the same position,—so that it goes into perfect "register."

For this, the camera and stand must be absolutely firm, the plate must go exactly to register in the holder, and the holder must go exactly to register in the camera. Any camera that is rigidly constructed and has a good stand will allow of this being done by a photographer who is sufficiently painstaking; but a modified form of plate-holder (or dark slide) will make it all the easier.

The second precaution relates to the focussing; for if this is done on the usual ground-glass, in its usual position in the camera, the image on the plate will be slightly out of focus because of the thickness of the glass coming in front of, instead of behind, the film. The easiest way out of this difficulty is to reverse the ground-glass focussing-screen; putting the ground side to the back, instead of facing into the camera. In this case, the focussing will be through the thickness of

glass, just as the exposure is to be, later. If only making one or two exposures in this way, it will answer the purpose if the focussing is done in the ordinary way, and thereafter the back is racked inward to the extent of the thickness of the plate used. This is Mr. Newton Gibson's method.

Many plate-holders will not carry two plates in the one side, and if your own are of this type, it will be necessary to obtain a special holder or to adopt a modification of the method which has certain other advantages; viz.: to use a flat celluloid film for the compensator negative. This overcomes any difficulty as regards focussing, but makes the registering in the plate-holder a little uncertain, and introduces a possibility of the film bulging forward in the centre, so that a part is slightly out of focus. We have overcome these difficulties by using a very thin rubber band to clip the film to the plate at each end. Even then the difficulty of exact registration is greater than when two plates are used.

The relative amount of exposure necessary for the compensator negative and for the final negative is a subject for personal judgment and decision; and varies according to the amount of contrast it is desired to correct. Perhaps the best way to regulate it is by considering the high-lights and the principal shadows of the picture as two separate subjects. The former should be quite fully exposed,—a little over-exposed, if anything. Then for the second exposure follow the good old rule of "exposure for the shadows, and let the high-lights take care of themselves," which they will do very successfully with the aid of a compensating negative. As a general sug-

gestion we give the exposures used by Mr. Newton Gibson in the case of a few examples submitted to us for reproduction:—

No. 1 compensator, 5 secs.; final negative, 10 mins. No. 2 compensator, 10 secs.; final negative, 15 mins. No. 3 compensator, 20 secs.; final negative, 23 mins.

It is possible to over-correct the highest lights, but this is a matter of development as well of exposure; or perhaps one might even say, rather than of exposure. Obviously, the compensator must not be developed to such a density that the high-lights cannot penetrate it at all; or the final negative will show what is ordinarily called reversal, though in this case it is not obtained as reversal usually is.

The exposure and development of the compensator must depend upon the whole aim of the picture. If there are only certain very strong lights to be guarded against and kept clear, a shorter exposure, and development sufficient to give the lights and their halation strongly, but not too densely, will suffice. If, however, one wishes to harmonize (say) the details of a conservatory, seen through a French window, with those of a badly lighted room in which the window is situated, it may be necessary to give a reasonably full exposure for the conservatory, and develop it to a fully detailed, rather soft negative.

Accuracy of "register," as has been stated, is most important. If no special plate-holder is being used, it is well to note:—

1. That the plate-holder slides easily into and out of the camera back, to prevent accidentally shifting the camera;
2. That the plate-holder comes to

rest against a definite stop preferably of metal; and

3. That the plate presses firmly against the lower edge and on end of the plate-holder.

Make a practice of registering the plate always to the same end of the holder.

Further, if a film is used for the compensator negative, it should be ex-

posed with a waste piece of glass (all the better if matt black varnished on the face) in the place to be occupied by the negative plate afterward.

Another precaution, which is, perhaps, obvious, is that steps should be taken to prevent any of the brilliantly lighted objects being moved between the beginning of the first and the end of the second exposure.

WORDS FROM THE WATCH-TOWER.


By WATCHMAN.

The Camera finds fault with me for a paragraph in my March batch of "words," rightly, I suppose, for I do not remember to which magazine I referred, putting on the cap. The facts are simple. *The Camera*, if that were the magazine referred to, offered two prizes, one of twenty, the other of ten dollars, for the two best contributions of what is called a literary contest; adding, "*We reserve the right to publish any article submitted.*" Following the lead of critics of similar offers on the other side, because *The Camera* is not alone in this kind of offer, I characterized it as "a method of getting contributions on the cheap," and now it says that it is nothing of the kind because it intended to pay for such articles as it might use outside of those to which the prizes were awarded. *But why did it not say so in its offer?* Telepathy is not yet sufficiently developed in my mental equipment to enable me to know what may be in the minds of others.

The Camera asks what it calls "a pertinent question," although we might find another name for it: "Does the AMERICAN AMATEUR PHOTOGRAPHER pay as much as the half of thirty dollars for original matter in any one of its issues?" and I have the publishers' authority for saying that it does, and further, that in the issue that happens to be before me now there is *one* article alone for which I know they paid the sum of thirty dollars. Hear what the publishers have to say: "No doubt the publisher of *Camera* will gasp at such extravagance, but it is our policy to pay according to quality rather than quantity. If there is one thing that the AMERICAN AMATEUR PHOTOGRAPHER is generally credited with, it is in sifting out the wheat from the chaff. It is common occurrence for us to return manuscript which is offered at any and all prices and in the course of a few weeks to come across these identical articles in the pages of our contemporaries."

THE CAMERA CLUB (NEW YORK) EXHIBITION.

A DISSERTATION ON PLANES.

 HERE are two ways of looking at any work of art or group of works of art. The first is just to look and see what you can see and receive general impressions. The second is to approach the works of art with a preconceived idea of finding some particular quality and to praise or condemn according to the presence or absence of that quality. Now, although this second attitude is narrow, and in many cases manifestly unjust, yet this is the attitude that I shall assume to-day in my criticism of the photographs in the spring exhibition of the Camera Club; and I shall do so because a narrow, concentrated, one-sided analysis, if it only has some definite object in view, is always more instructive than a broad scattering generalization. Therefore, suffice it to say that the standard of the exhibition is high; that the 116 prints on the walls are delightfully refreshing, showing throughout characteristic and original treatment. Having said which I will devote the rest of this article to one idea, namely, to "planes," and will search for them wherever I can find them, and condemn where I cannot.

The word plane—defined in the dictionary as "a surface such that a straight line joining any two of its points lies wholly in the surface"—is used by artists in two distinct senses. When a sculptor or portrait painter speaks of a plane he usually employs the word in approximately the dic-

tionary sense; he refers to the modeling of a head or arm as consisting of "too many planes"; or the planes in the representation of a hand as being "well defined"; or he will speak of the planes as not being "intelligently chosen"; or as being "confused," etc. When a landscape painter employs the word plane, he is generally thinking of the actual receding planes in a landscape or picture; he may express himself through the same phrases the sculptor does, but instead of referring to qualities of modeling, he will mean certain qualities of space. In these two senses, especially the latter, I will use the word, and as we go from picture to picture will try to make clear why a picture, to be a work of art, must be resolved into planes; how all important planes are, etc., etc.

The first print that should attract our attention is Alfred Stieglitz's "Horses." A black horse, and a white horse, and some harness, filling the greater part of the area of the picture; an indefinite and uninteresting background, and nothing more. Yet here we have one of the masterpieces in straight photography. And why is this a masterpiece? The horses certainly have a large and much present appearance, but is this not merely due to their covering so much of the paper? Do not all objects gain in effect of largeness if within crowded limits? Yes, to a certain extent, but most of the effect of bigness of these horses is due to the judicious handling of the planes. First observe that there are

two planes (landscape sense) and only two: the first being the horses, and the second the background. Then observe that these two planes are kept quite separate; they are distinct from each other. Then examine to find in what manner they are kept separate. Not through difference in values, for part of the landscape is of the same value as the shadows on the white horse, but through difference in focus, the horses being the more defined of the two. This without doubt you will say is a most trite observation, for inevitably, owing to its own constitution, the lens can only be focussed on one plane at a time, and all other planes must be more or less out of focus. True, but if in this special case the background had been a trifle less out of focus it would have begun to become confused with, and attached to the horses. "And what is the harm if a background is attached to the foreground?" you may ask. The harm is that the instant the background becomes attached to the foreground, that very instant does our subconscious judgment say, "The background and the foreground are on the same plane and therefore one; there is no space between them; neither are real," and of course the moment the reality is gone, then that same moment the illusion is also gone and we see only pigment.

On the other hand, suppose the landscape behind the horses to have been more blurred, then would the horses have, by contrast, become clearer and *forced forward*, that is, as painters term it, "out of the frame"; they would have ceased to be *enveloped*, the photo-tonality would have been lost. In other words, Stieglitz,

out of the hundreds of different focal relations the foreground and background could have had to each other, chose exactly the right one. It may appear to you that I am very much exaggerating both the importance and the difficulty of obtaining correct plano-focal relations, but I assure you that I am not—it is well known among successful portrait painters that the problem of the planal relations of a background to a head is fully as difficult as the problem of the head itself. No end of photographs *just miss* being good on account of a slight defect in these very planal relations.

Now let us examine the picture from the sculpturesque standpoint; let us look for the planes of modeling. Note the beautiful distinction between the black horse which is black all over, and the white horse which is white all over, and that, in spite of the dark shadows. Note the few broad areas of light and shade into which the horses are divided and how "flat and simple" each of the areas (planes) is kept. Observe further the absolute truth of values—without correct values the planes would have jumped out of their place (come forward or gone back): each single value and plane is right. And it is this truth of modeling, placed, so to speak, upon the primary truth of "landscape planes" that makes the "Horses" the big picture it is.

"Spring," another picture by Mr. Stieglitz, is a fine example of planes, but distinguished from each other by means of *values*, rather than through focus. The subject is simplicity itself; a child stooping to pluck a wild flower, a few shrubs and a tree in the distance. The technique is appro-

priate to the subject, the three planes overcome any tendency to flatness, and the high key prevailing throughout is very suggestive of spring.

"The Orchard," by Clarence H. White, is a fine landscape with figures of the same planal character as Stieglitz's "Spring." Plane first is the nearest figure. Plane second is the two smaller figures and tree. Plane third is all beyond the tree. The ground is a gradation from the first to the second plane.

See how simple the scheme is; most artists would have attempted to get half a dozen planes into such a picture, with a proportionate loss of simplicity. Remember: always tell your story in the fewest possible planes. Now note the sudden jump from plane two to plane three and how flat plane three is; it is of the same value near the horizon (with the exception of the hill to the top and right) as where it joins plane 2. Always make big jumps in values in your planes when you can: that gives life, vivacity and character. Always keep the planes flat when you can: that tends to produce breadth.

Try the following experiment. Expose four sheets of any kind of photographic printing paper to light so that each sheet shall become of a different degree of darkness. Out of these four sheets cut the silhouettes of what you may decide upon as being the first, second and third planes of one of your photographs. Lay these silhouettes upon the fourth sheet (that is upon the lightest sheet, or fourth plane) so that they properly overlap. Try several experiments of this kind and you will learn considerably.

The work of Clarence White is pos-

sessed over and above almost all other photographs of a most beautiful quality. It is always limpid; you feel when you are looking at a White that you are not gazing through a fog of mannerisms (which mannerisms even sometimes great artists possess), but that you are looking at the thing itself. His work is as clear as that of the snap-shotter and as soft as that of Corot. The quality is impossible to analyze, as it consists of a particular combination of almost all other qualities, but look for it whenever you see any of his work, particularly an original.

Landon Rives exhibits two interesting portraits, and Joseph T. Keiley four pictures, one of them, "Sunrise, Lake George," done in true Keileyesque technique, dreamy and poetical, is beautifully resolved into plane after plane (silhouettes in this particular case) receding to the sun on the horizon—the dearest and tiniest little sun you ever saw. But even though the planes are well differentiated I can't go that sun. "A wrong angled lens," photographers say, but I say that for psychological reasons the sun and moon must always, especially when near the horizon, be portrayed much larger than they are.

Gertrude Kaesebier shows three portraits, and in one of them (No. 68 in catalogue) every plane is wrong; it is impossible to tell which is meant for which. The head and shoulders of the woman (it appears to be a woman) come forward and beyond the table on which rests a large glass ball (or is it a globe of fishes and frogs?); but in truth the table and fishes should be nearer than the head. The skirt of the woman moves up to the

plane of the table, and the background fluctuates. The reason is that plane 1st (table and frogs) is almost as much blurred as the background and recedes into the background (plane 3rd) leaving the head and shoulders swimming in a sensuous spring-like atmosphere; and in reality the whole thing affects me more as if I were looking at a landscape than a figure piece.

Now it seems to me that it is altogether wrong that the sight of a woman should make one feel as if one were looking at a landscape. Women have charms enough of their own not to be required to be metamorphosed into vapor and scent to make them palatable. I must say, however, that whenever Miss Kaesebier chooses she handles her planes powerfully, as for example in the other two portraits she exhibits.

The lesson to be learned from Steichen's work, is, that although planes must be distinctly separated, yet there should never be a too abrupt change, they must in part sink into each other. Look at the nude, "The Little Round Mirror," see how it melts into the background, the instant you have found a definite spot of demarkation, it is gone. And of "The Flatiron—Evening," the same is true. Analyze the planes: plane 1 is the tree branches and wagon to the left, but eyer and anon the branches sink into plane 2. Plane 2 is the Flatiron and other buildings, but observe how they melt into plane 3, which is the sky. (This is a color print very true in tone: delicate green sky and grey violet shadows.) Steichen is so much a master of planes that it is approximately safe to say that he is always

correct, and even if your art tends in a totally different direction, you can always turn to him for the study of planes.

J. B. Kerfoot's "White Dog" is one of the most charming conceptions I know of in pictorial photography: the composition of the mother, the black naked child and the dog is most attractive. The mother and baby are so interested, and the dog—he's so bored with the whole performance and yawns. But it is the two figures to the left that complete the picture, it is that group which displays the greatest talent. See: without the group there would have been a little of the feeling of the "composed picture," but its presence gives the scene a "natural air;" we feel that it is just the kind of thing we might find on entering the poorer parts of a town. Further: this second group is as near to the spectator as the mother and boy, that is, plane one, but Kerfoot, with the clearest understanding of the psychology of his art, has thrown it into the second plane, but only from the *focal standpoint*, leaving it in the first plane from the *value standpoint*. Now this is exactly what the eye itself will do when it fixes itself upon any particular spot or area: that one area will be clear while the surroundings are blurred. If Kerfoot had focussed the second group as clearly as the first, then it would have attracted too much attention and the picture would have been cut in two. The old masters absolutely condemned this method, but it was much practiced by Germany's most famous modern portrait painter, Lenbach, and also by Whistler. This, however, does not excuse Käesebier's

Alfred Stieglitz

HORSES

SPRING

Clarence H. White

THE WHITE DOG

I. B. Kerfoot

SUNRISE, LAKE GEORGE

Joseph T. Kelley :



1

POBTRAIT

A. K. Boursault

PORTRAIT

E. Lee Ferguson

PORTRAIT

Chas. I. Berg

PORTRAIT

Char. I. Berg

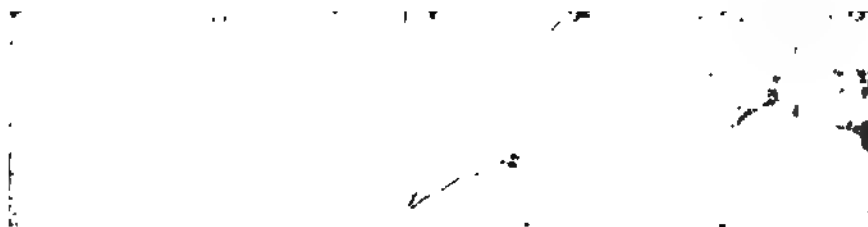
MRS. GILBERT

Chas. I. Berg

1

TWO MAIDS OF ST. IVES

Copyrighted 1905 by
F. Benedict Hersog



WHITE BIRCHES

M. W. Seaman

DRIFTING SNOW

M. W. Seaman

THE LAKE

Chester B. Duryea

SPRING

Rudolph Eickemeyer

MALLARDS

Ed. Heim

CHILDREN AT PLAY

Hy. Gaioupeau

IN YORK MINSTER

H. T. Rowley

A GLIMPSE BEYOND

S. S. Webber

gold fish, for in that she has broken and annihilated the central group.

F. Benedict Herzog exhibits many prints—it is quite impossible for me to make out any of the planes: they seem to be everywhere. When I look at a Herzog I always feel that his work is totally different from that of any other photographer—I have never

who has attempted to combine the merits of Michael Angelo and Frans Hals.

The "Boy with Boats" by J. Francis Strauss is easily resolved into its planes, it does not require pointing out, and is particularly interesting as being a good proof that, in spite of the many theories to the contrary, a

STREET SCENE

yet grasped its meaning, so will refrain from criticism except to say that in a Herzog you can feel the reverberation of the thoughts of the old masters (after they have passed through his intellect and become imbued with his personality): Titian, Veronese, Rembrandt, and so forth. Herzog is the only photographer I ever heard of

Harry Coutant

strong light will keep its place in a distant plane—it is only necessary to give it the focal characteristic of that plane.

As a *picture* the "Boy with Boats" has unusual merits. The "story" is complete, and the decorative arrangement of masses not less so, the white boats to the left balancing the door-

way very interestingly. Put your hand over the white boat and see how much life and feeling are lost.

In Ed. Heims' "Mallards" the planes are evident, but they make no picture in spite of being so real; the ducks are too small to be the feature of attraction, and yet too large to overlook. Perhaps they will make good eating some day.

ing to lack of contrast, entirely lost its interest.

Chester B. Duryea in "The Lake" gives us an example of forced planes. I admit the scene to be true to a certain effect often seen in nature, and the second plane: sky, distant mountains and water is exquisite and just as it should be; but if the first plane, the island, had been several shades

FOLLOW THE LEADER

Some "Fish" by A. Radcliffe Dugmore points to the important truth that planes may be successfully used to increase interest in any one particular plane. Just imagine the weeds in plane 2 to have been as clearly seen as in plane 1. Not merely would there have been no atmosphere, but the curious detail in the fish would have, ow-

M. W. Seaman

lighter, none of the feeling of space would have been lost, to the contrary the feeling of space and atmosphere would have increased and extended itself over the island, which is at present out of photo-tonality.

W. E. Wilmerding exhibits three very delicate pictures, but they are unfortunately too delicate for reproduc-

tion, so I will not mention them further.

W. G. Eckstein shows a little portrait with well defined planes, and Henry Galoupou some "Children at Play." Now the plane of these children is so well marked that they are silhouetted: they are *cut out*, and it is this almost complete separation, overinsistence upon planes, that produces

be remembered that it is better not to differentiate planes than to differentiate them wrongly. It must also, however, be remembered that if one ever wishes to do strong (realistic) work it is necessary to begin with studying planes.

M. W. Seaman's "Drifting Snow," renders the drifting superbly. The picture is also a good example of how,

BOY WITH BOATS

the feeling of hardness which is so noticeable.

E. Lee Ferguson's portrait has a certain charm, mystery and softness due to there being *but one plane*. This is of course perfectly possible of attainment. The values in the hair and background are about the same, so they run together, and so does the focus of the planes. It must always

J. Francis Strauss

what should really be a second plane, can be made a first—the focus is upon the trees and sheds, thus bringing them forward, while the immediate foreground is left to take care of itself, and in this case I admit that it does. (The reasoning applied to Kerfoot's picture to a certain extent applies here.) The snow in the "White Birches" is very soft and solid and its

whiteness is beautifully spread on the darkness behind. These birches make the picture: place your hand over them and see how the whole scene becomes dull. "Follow the Leader" is a delightful and humorous conception, but what particularly interests me is that there is but one plane, at least in the accompanying reproduction, and it is the *perspective* of the row of ducks, or geese is it? that carries the eye into the distance.

Rudolph Eickemeyer usually focuses on the nearest plane. This appears to me to be logical. It is apt to give a sense of solidity which is very marked in his "Spring," and this picture is solid in spite of the fact that it is made of such ethereal substances. For a period, under Ruskin's and Turner's influence there arose a school of painters who threw the immediate foreground out of focus and centered on the distance or middle distance, but now artists are generally agreed that this conception is fallacious, and what is nearest and most easily seen is made the most distinct.

A. K. Boursault shows a portrait which is what a portrait should be: a character study and not an excuse to

exhibit clever technical work, or a scheme of color, as so many modern painters hold.

Chas. I. Berg's portrait of Mrs. Gilbert is a good character study, and Harry Coutant gives us a study of a street—in snow. H. T. Rowley's "York Minister" is very sound in values and would be a picture and not merely a study if it only had one or two little touches of life in the shape of some distant and small figures. They would detract nothing from the sombre grandeur of the edifice.

S. I. Weber's "Glimpse Beyond" makes a picture, and it is the glimpse beyond that does it, and the foreground that makes the glimpse beyond, i. e., the feeling of space and distance. A foreground can be obtained without a distance, but it is almost impossible to get a distance without a foreground; a distance without a foreground moves up to us.

Weber's "Dandelion Clocks" are mysterious inasmuch as one cannot possibly make out what he is after. I cannot say that I admire them very much.

ROLAND ROOD.

THE HANGING AND ARRANGEMENT OF PICTURES.

Beside being works of art, pictures have an important office to fulfil in the home as decorations for the walls. A room may be perfectly equipped with all the necessary articles of furniture, its floors satisfactorily covered with carpets or rugs, the window light screened or tempered by appropriate hangings and the walls papered in artistic colors and designs, yet not be altogether satisfying. The reason is apparent by a glance at the pictureless walls.

Masterpieces of art are, of course, beyond the reach of the ordinary household, but there can be found at the present time a larger variety of good pictures at a moderate price than ever before.

The hanging of a picture makes or mars its success as a decoration for the room. If the colors are painted or printed in bright tones the degree of light needed is not so great, in the daytime or evening, as with colors of less intense hues. Dark

RESIGNATION

Miss Mattie S. Mitchell

First prize in A. A. P. monthly (May) competition

corners of the room may be perceptibly brightened by the introduction of pictures in vivid colors—pinks, reds and yellows.

Large pictures require distance to appear to their best advantage. This rule applies also to compositions of a certain character, winding roads and curving brooks that seem to disappear beyond the horizon.

Family portraits bear so intimate a relation to the life of the household that they belong in the living-rooms, except when for some reason they fit into the scheme of decoration for the formal rooms, hall or drawing-room.

Portraits of celebrated authors acquire

increased interest when placed near their works, and pictures of composers are more attractive when hung near musical instruments. In one library a little gallery of authors' faces was made by filling the entire wall above the book-shelves with prints framed uniformly. The idea might be taken up in a music room with the same success, using good photographs or engravings of persons eminent in the musical world.

Small pictures distributed at intervals upon a wall lack the style that they give when grouped more closely together. The same principle is true of the small plaster medallions that are usually hung, each by itself about a room.

Two different methods of hanging pictures with a wire cord can be followed. One is to use one hook for each picture and have the cord form an acute angle where it falls over the hook. The other plan is to use two hooks and two separate cords, the cords making two separate perpendicular lines from picture to hook. The latter way is better for large, heavy pictures, the former more suited to pictures light in weight.

The proper height at which to hang a picture is often questioned. A good general rule is to bring the center of the picture within eye range of a person of ordinary height when standing before it, but this need not be inflexibly followed. Sometimes three pictures framed alike and similar in composition or coloring are to be hung one above the other, as in the illustration. The middle picture, which will look better if a size smaller than the other two, should be the one in eye range, and the space of an inch left between the pictures above and below.

One common mistake of an inexperienced picture hanger is to bring into juxtaposition pictures with dark and light mats. Harmonious results are impossible to effect when this is done.

In many houses the hallway is quite overlooked in the matter of picture decoration. The opportunity, either in a living or reception hall, is too good to be lost, and, as shown in the illustration, adds to the livable qualities of the place. *The Delineator.*

Small Pictures Framed Alike Look Better When Hung Closely Together

1

THE LAND OF THE SKY

Edward A. Donaly

Third award in A. A. P. monthly (May) competition

OUR PORTFOLIO.

Prints for criticism; only one at a time and only once each month; to be sent to Dr. John Nicol, Clifton Springs, N. Y. The coupon found in our advertising pages must be attached to the back of each print.

1959. J. HARMANUS FISHER.—The unnamed print, a road by the bank of a stream, is of nearly perfect technique, and would have been quite so had development been stopped just a little sooner, or probably with a solution weaker in reducer. The fault, or rather the result of over development, is shown by the too white sky and the over-whiteness of other lights. The subject is fine and selection of view-point faultless, although the result is not satisfactory, the error being the use of a lens of too short focus for the subject included. While the perspective is correct it *appears* to be wrong, the road contracting to a width of a quarter of an inch from a width of three inches within a distance of only two inches.

We have been thus particular because otherwise this is such a fine print, and because from the use of lenses of too short focus people have got to talk of *photographic perspective* as if such was a necessary fault incident to photography instead of due to the selection of improper lenses. Nor are photographers altogether to blame, as opticians and dealers in cameras lead the way, the one listing their lenses according to the sizes of plates they can be made to cover, and the other fitting their cameras with such lenses for economical reasons.

1960. DR. F. E. WEEKS.—The print No. 7, a foreground of water leading through an opening in dense foliage, and with a fine cloudy sky, is a fine example of both selection and photographic technique; and a real pleasure amongst so many under exposed negatives to find one where exposure has been something like correct. Good as it is, we think it might have been just a shade better by a slight movement of the camera, the two masses of foliage at the two sides being just a little too equal, giving a slightly mechanical effect or feeling. It is a pretty picture although we cannot see just why you chose to print it under an oval mask; not that it looks

bad, but that we think it, as almost all pictures do, would have been better without the cutting off of the corners.

1961. G. M. BRIGGS.—“Two Posies” is of no particular interest except perhaps to the two who are portrayed, and while the photography is passable the arrangement might have been much better, as they are simply standing to be “taken,” merely staring into the camera. If you wish to do anything good in portraiture you must give it more thought and train your models. And then, never put them into a circle as here, that makes them look dumpy and girls don’t like that. One good thing about this is that it is properly exposed, a rare thing with prints that come to the Portfolio, and if you will think more and study good pictures you will by and by do good work.

1962. S. F. CLOWNEY.—“Spring Plowing,” although a very hackneyed subject, is very well placed, and but for one serious fault, would have been a good picture. But surely you must see that it is far too black. People do not plough in the dark, and with such a white sky everything below it should have been much lighter. The fault is under exposure, and before you could develop what you have it had to be pushed till sky and what of the soil was in white light is far too white. Two or three times as long would have been required to make this a good photograph, and till you learn to give sufficient exposure you will never do good work.

1963. G. BERDGE.—“Spring,” a lady in white pulling down and smelling the blossom of a fruit tree, leaves little to be desired. It is a difficult subject in which the difficulties have been more than fairly well overcome, although a little more care in the development and with a solution weaker in the reducer might have given you fuller detail in the white drapery; and although we are averse to retouching, we should

PLAYMATES

Second award in A. A. P. monthly (May) competition

John F. Jones

ground, as without answering any necessary purpose it tends to disturb the eye on its way to the stronger and better parts of the picture.

1965. CARL KREBS.—"In the Harbor" is not nearly up to your usual mark either in color or composition. The horizon line is too near the middle and the masses of dark above and below are too nearly equal to be pleasant, and give a suggestion of the mechanical rather than the pictorial. Of all colors the slaty-blue of over toned P. O. P. is to us the most unpleasant, and this approaches it near enough to make us dislike it. Experiment, however, shows that the fault does not lie altogether in the print itself, but is largely contributed to by the brown mount. Mounted in contrast instead of harmony, the shade of brown in the print proclaims itself instead of being altogether killed by the deeper brown on which you have placed it. There is more in mounting than some of our readers are inclined to believe.

1963. SPRING

G. Berdge

have liked to see the rather sharp elbow slightly rounded by a touch of the pencil. Apart from that, however, we like the picture very much and consider it one of the best that have come to the Portfolio this year.

1964. W. F. SCHMIDT.—"Along the Wild-wood Path." This is another print from the negative of 1932 in our April Portfolio, that, according to its author, having been a spoilt print sent by mistake. This is very much better although not quite what it might have been, as it has been too deeply printed or not sufficiently developed. Like its predecessor, it is on green carbon, but where the higher lights should be there is only a lighter shade of green or greenish yellow, even the parts of sky shown through the trees are only a shade less green than the foliage. Shorter exposure of the print or development in warmer water would have made all the difference, and it is more the pity, as the subject and arrangement are fine. We may add, however, that in our opinion the composition would have been improved by the removal of the prostrate tree in the fore-

1966. F. SOLOMON.—"Evening Shadows" does not in any sense appeal to us, the only impression conveyed being that of a very much under-developed negative, everything being equally black. In nature we can understand its having been peculiarly beautiful, but you have failed to give even a suggestion of the beauty, there being but two tones, the one black, the other grey, little of the latter and much of the former.

1967. C. A. CAMPBELL.—"Home Portrait" is a very good photograph of a child, evidently self-posed, and with more expression than is generally found, the impression conveyed being that of weariness from several sittings. The only fault we have to find with it is the mass of lace around the neck extending half down the chest and taking and keeping the eye from the pretty face. In professional child portraiture there is an excuse for such decoration, as the will of the mothers is supreme, but with the amateur it should be different, and nothing should be allowed that will interfere with the charming little faces. Plain dresses and every-day dresses at that, should be insisted on.

1968. H. H. HARVEY.—"An Afternoon Frolic," two children in a hammock, except

for the excess of plain and unnecessary foreground, might have been a very pretty little picture, but from under exposure and probably under development, and in spite of intensification, is very much too dark, almost black, while the sky is simply white paper. After all that we have said of under exposure it is discouraging to get such prints, and all the more so as with proper exposure this would have been a really fine thing.

1969. H. W. STURTEVANT.—“Winter.” We can hardly acquiesce in your request to “roast” your print, as it is one of the best of its kind that have come to us this season. The composition and arrangement could hardly be improved, while the technique leaves little to be desired. One slight fault is the lack, or almost lack, of atmosphere, the distance being almost as well defined as the foreground. Taking it all in all we like it very much, and it has the good quality of growing on us, that of being liked better and better each time we go to it. But—. There is always a but, and this time it applies to the mounting. A three and a half by three print on the corner of an eight by eight mount approaches to the eccentric, and eccentricity is not favorable to true pictorial effect, although you have, partly at least, overcome that by the title in fancy letters placed so as to suggest the necessity for the size and placing.

Mounting is, of course, a question of taste, and we are perfectly aware that this style of mounting has many supporters, some of them at least better judges than we claim to be.

1970. A. P. SCHEIMAN.—“The Advertising Manager,” a figure writing with a pencil, is not altogether satisfactory. A “home” portrait taken in a room with a window on each side, shows the natural result of a too flat lighting, a face without light and shade or contrast, and without texture, being almost as white as the collar, or the paper on which he is writing. The background is also unfortunate, being as dark as the hair with the result that there is no distance between them. The arrangement is perfect and with one source of light instead of two, and that properly arranged or reflected, you might have scored a success. When, as in this case, a head

is not separated from the background either by color or suitable lighting it looks as if cut out and pasted on. Try again under the same conditions but with only one of the windows and probably a reflector, and with a different colored background, or with the same so lighted as to differentiate the head from it, and we shall be glad to see the result.

1971. G. H. SMITH.—“Dorothy,” four small portraits pasted on a card and copied to about “cabinet” size, each pose being different from the others and none of them anything like what they should have been. That is, they have been posed, a thing that hardly ever should be tried with children, and the little one has been dressed for the purpose, a thing that is almost as bad. The work on the whole is about the average of a third or fourth rate country photographer, and can have no interest beyond the family to which she belongs.

1972. J. ROESCHLAU.—“Almost Winter.” Nothing favorable can be said of this. It is lop-sided, that is the bare branches and the land on which they grow form a wedge beginning at one side and ending in a point near the other, and with nothing else but white paper intended to represent both sky and water. A much longer exposure and shorter development was necessary to make the photograph worth looking at.

1973. E. A. DONNALLY.—“Sunny Jim,” a negro sitting on a stump, is excellent in almost every way—placing, expression, pose and even technique leave almost nothing to be desired. But, we must find some fault when something is so good. A little more exposure with the consequent shorter development would have made the sky a little nearer the natural tone and the picture, good as it is, just a little better.

1974. A. L. ROGERS.—“Homeward Bound,” a number of cattle on their way home, although a fairly good photograph, is neither picturesque nor pictorial, and the exposure has been so short that development has been pushed till the sky is simply white paper. Surely you must have learned that such a white sky is intolerable, and that if for any reason it should have been produced it should have been toned down to some-

thing like what is seen in nature. Although a thoughtless snap shot, the toning down of the sky would have been a decided improvement; would have made a pleasant "record of fact" of what is now almost a waste of good material. You may always take it for granted that when you make a print with such an unnatural sky there is something very far wrong.

1975. FRANK CRAFT.—"Franklin County Hills." As a rule, photographs of a large tract of country are of little interest from a pictorial point of view and even less where art is concerned. Topographically, however, especially when they are as good as this, they have their value, and we have never seen one better. The very quality which excludes it from the pictorial, the lack of atmosphere, enables us to see detail in the most distant hills, even although they are, as usual, dwarfed by the employment of a lens of far too short focus for the purpose. In spite of that, however, it is one of the best topographical photographs that we have seen.

1976. JOHN F. JONES.—"In Winter's Grasp," consists mainly of a snow-clad foreground reaching nearly to the top of the

print, and with a broad streak of open water running at an angle across, and only the lower parts of trees showing at the top. Both snow and water are broken up by shadows, those on the water curiously suggesting a going downward instead of right across. The picture needs study, and the more it is studied the better and greater the suggestion of winter becomes apparent, so that the more we go to it the better we like it; which is very much more than can be said of most winter scenes that come to us. Its greatest charm is that there is really snow, not white paper, and that the snow has texture and both light and shade, as snow should have when taken with the sun where it should be, that is, either in the morning or the afternoon.

1977. W. D. HAMILTON. — "Dinner Time," a number of sheep, some of them eating from a "hake," a frame-like arrangement intended to prevent the scattering of the food, is in conception and arrangement fairly satisfactory, made all the more so by the watchfulness of the one that looks older than the rest, too intent on keeping its eye on the photographer to care for eating; and the hint of humor and feeling

of contrast afforded by the equal watchfulness of the little lamb on the right of the composition. But its good qualities are more, much more than counterbalanced by its one great fault, perfect blackness where blackness should not be, as sheep do not dine in such midnight darkness as is indicated by all behind them. The fault is probably the under-exposure of the negative, the besetting sin of most photographers.

And just a word anent your mounting. There is no reason why you should take the trouble and the risk of injury of placing a $7\frac{1}{2} \times 4\frac{1}{2}$ print on an 11×14 mount of common, or any other kind of board.

We don't take the mounting into consideration in our estimate of a print, and while we prefer prints mounted the mounts need not be much larger than the prints.

1978. S. F. CLOWNEY.—“The Discarded Shoe.” Four chicks, little more than out of the shell, amusing themselves wandering in and out and over an old shoe, is hardly amenable to criticism further than to say that it is in every sense a very good photograph and very cute.

Prints from “T. J. L.,” Montreal, cannot be noticed until the full name is sent, not necessarily for publication, but for our own satisfaction.

OUR TABLE.

Books for review and apparatus and material for examination and report to be sent to Dr. John Nicol, Clifton Springs, N. Y.

Elsewhere in this number will be found reproductions of the three best prints entered in the continuous monthly competition. On account of the evenness in quality the prize money has been divided this month between Miss Mattie S. Mitchell, John F. Jones and Edw. A. Donally.

Five Dollars is offered each month by the editors of the AMERICAN AMATEUR PHOTOGRAPHER for the best picture. This is done with the object of encouraging our readers to send some of their best work for reproduction and competition. The pictures are exempt from “Portfolio” criticism. The coupon to be found in our advertising pages must be attached to each print, the package marked “Competition” and sent prepaid to Dr. John Nicol, Clifton Springs, N. Y.

THE SIMPLEX EXPOSURE METER.—This meter, mentioned in our last, has already been very much improved, the holes being placed on a revolving disc examined through a larger opening in the main card, and as the disc is turned the exposure for each is brought in line with the hole. Nothing could possibly be simpler, it being only necessary to decide as to the smallest hole

through which detail in the shadows can be seen, and the exposure with *f*-16 is found below it. Both the U S numbers and the *f* values are marked, so that No. 16 and *f*-16 being found it is only necessary to double or halve the others in succession. From the few experiments we have been able to make we have no doubt that with a little practice the Simplex Exposure Meter will be found a great help in the difficult question of correct exposure.

WITH THE CAMERA, the monthly circular from the Illinois College of Photography, tells of the interest shown by the students in the State Convention held in Effingham during the first week of May, of the brilliant display made by the stock houses and manufacturers, and of the fact that two of the prize takers were graduates of the college.

The College Camera Club has held another salon, the prizes going to Messrs. Griswold, Brown and Berry. The Club quarters have just been refurnished and several accessories added to its equipment.

We are glad to notice also that the people of Effingham have shown their appreciation of Prof. Bissell, the president of the college, by electing him mayor.

THE NEW "COMPETITOR" folding view camera is the latest production of the Seneca Camera Mfg. Co. of Rochester. It has every improvement and will appeal to the practical man who wants a thoroughly high grade instrument at an unusual low price. It is one of the best view cameras that has come under our notice and we predict it will have a large sale.

* * *

THE ROCHESTER LENS Co. of Rochester, N. Y., offer an anastigmat F6.8 lens that is meritorious. Made of Jena glass and composed of light separate lenses. We have seen some of its work that certainly does the lens credit. The R. L. Co. claim their lens will do work equal to any anastigmat made. A handsome catalogue of photographic lenses may be had by addressing them.

* * *

THE PRINDLE PROCESS COMPANY, of 74 Broad street, Boston, is placing upon the market a new discovery, known as Obifo. This preparation is mixed with water and the solution is used like developer, the plate or film being submerged in the Obifo when taken from the camera and then developed in the regular way, the Obifo bath requiring but a few seconds, from five to ten. The preparation is simple and effective. It permits of loading and developing plates or films by gas or subdued daylight, allowing the plate or film to be exposed to white light, a result heretofore unobtainable.

Some time ago we were shown several prints from negatives that had been treated with Obifo. What impressed us at that

time was the very faithful rendering of the color values. If Obifo will enable our readers to avoid the errors and evils of under-exposure, we wish it all success and hope to be able to give the result of a practical test in our next.

* * *

THE PRACTICAL PHOTOGRAPHER for April deals with "Animal Photography" and in its usual thorough way, the experience of over ten well known animal photographers being recorded and enforced by over twenty good illustrations.

Viscount Maitland is the pictorialist chosen for exploitation in this number, and the eight examples of his work show that he is equally at home in portraiture, *genre* and landscape, and that he is not attached to any particular school.

In our notice of this interesting magazine in our May issue we were made to compliment the "Era" Publishing Co., the prefix having dropped out, although doubtless our readers understood that it is to the Photo-Era Company that they are indebted.

* * *

GET THE HABIT of using a meter, and spoil fewer plates. The plate makers will be glad, for they would like to know that you get twelve good negatives out of a box of plates. Really it is very little trouble, this using a meter and it gives a deal of confidence and means exercising more care and thought in your work. Get a Wynne meter if you can afford it, we can recommend none better. If you think this too expensive you will see others advertised that will answer the purpose; and remember that any meter is better than none at all.

* * *

It will be of great interest to all photographic workers as well as to dealers in photographic supplies to know that the New York office of the G. Cramer Dry Plate Company is distributing to all dealers this spring and summer, very beautiful samples of work on its plates. These prints are made from negatives by the foremost workers in the country, and are of great pictorial value as well as plate quality.

LETTERS TO THE EDITORS.

A Plea for Straight Photography

EDS. AMERICAN AMATEUR PHOTOGRAPHER:

Dear Sirs—I take occasion, in renewing my subscription, to say that I express a preference for your publication over the others, but regret very much that pictures like page 523 of the December number and many others of the fuzzy type variety receive such recognition in your publication and in other magazines. It seems to me that all technique has been absolutely sacrificed in an endeavor to obtain a suggestiveness which is unnatural. Adaptability of the eye to various distances is instantaneous, and hence the distance as well as foreground is to the perfect eye always in good focus. I believe that a certain amount of latitude towards "fuzziness" is allowable in order to obtain atmosphere; but it has its limits, and the limits have been more than reached. It seems to me that it is purely and simply a fad which sooner or later must die of its own weakness.

I have profited by your suggestions as to the use of lenses of long focus, and also of full exposures. I have had an experience of some twelve years, and although I claim no particular ability, still I have gleaned in that time a very fair amount of chemical and optical knowledge, in pho-

tography, my bent being rather more scientific than pictorial.

Very truly yours,

New Orleans, La. PERCY S. BENEDICT.

Goerz Prize Competition.

Gentlemen:

We take pleasure in announcing through your valued columns, that we have decided to open a photographic competition for a new catalogue cover, and are offering \$300 cash prizes for the best work submitted.

The pictures entered will be judged solely for their artistic value and their appropriateness as a cover design.

The competition is open to all amateurs and professionals, the only restriction being that the picture submitted be made with a Goerz Lens.

All requests for information will be cheerfully answered. The envelope should bear besides our address, the mention, "Catalogue Cover Competition."

Pamphlets giving full particulars and conditions, can be had from all dealers, or on application from the C. P. Goerz Optical Works, 52 Union Square, E., New York, and Hayworth Building, Chicago.

Yours very truly,

C. P. GOERZ OPTICAL WORKS,

ANSWERS TO CORRESPONDENTS.

Questions for answers, matter for publications, and all communications to the editors should be sent to Dr. John Nicol, Tioga Centre, N. Y.

Air Bells in Carbon Printing.

W. H. THOMPSON.—Although having had considerable experience in carbon printing we have never met with such a mass of brilliant spots of air-bells between the film and the glass, but Max Boelte, one of the most experienced carbon printers in America, in his book on that subject, attributes it to not having allowed the printed film to remain long enough in the cold water before transferring, and we are inclined to agree

with him; sure at least, that the fault arises in some way from included air in the film. The question might be settled by a few experiments which from circumstances beyond our control we are unable to make now.

A Question of Exposure.

J. Y. SIMMONS.—You are wrong, the white sky and fence do not mean over exposure but over development, probably a result of *under* exposure, development hav-

ing been pushed with a view of getting detail in the shadows that could not come because of the too short exposure. Nothing short of an approach to correct exposure will give anything like true values, and with correct exposure everything will appear in its true graduation before either sky or anything else becomes, in the negative, opaque.

Pigment Printing in Colors.

TRUTH.—We quite agree with you, although at the same time the latitude allowed in advertisements is so well known that no one is deceived. No one, for example, believes that "It is all in the lens" or in anything else, and the man, or woman, behind is the most important factor in the making of pictures. The colors produced on the paper to which you refer are not in any way dependent on the colors of the subject, but on the degree of intensity of the light that passes through the negative from which it is printed. The colored tissue is laid on in layers; first, say the green, then the browns going to red, and lastly the blue. The foliage in the negative is generally so thin as to allow light to pass sufficient to harden or make insoluble the whole series of layers; the browns are a little more dense, the reds still more, and the blues, like the skies, most dense of all, passing only sufficient light to render insoluble the upper layer and thus giving a blue sky; development beginning, as you know, from the bottom or under side of the films. Don't forget, however, that although the colors may not be the colors of nature they will be interesting and generally pleasing, decidedly different from the usual white and black or monotone.

Exposure Meters.

FLORA WOODBURN.—Tables may be, to a certain extent, helpful but they do not discriminate between the variation in the light that takes place from day to day, while the exposure meter that is also an actinometer, that is a light measurer, gives you information that is practically infallible. It is true, as your friend says, that even with such a meter there is need for some personal equation, some exercise for thought and allowance for varying subjects, but not nearly so much as with the tables. We might put the question in this way. The

table, of four parts, gives you information anent one and leaves you to find out the other three, while of the same four parts the meter tells you all about three, leaving only one for self investigation.

GEO. HOLT.—There would be nothing new in the use of mica, nothing that you could patent, and nothing that is not much better done with celluloid, the scare of which is not nearly so great as you seem to suppose. The Rotograph Company, we understand, are already sending out carbon tissue on celluloid, and we have no doubt that they would be ready to meet any demand for other films prepared in the same way. We do not say this to discourage you, but to put you on the right track,—on a way that would be practical.

(Mrs.) W. L. RALSTON.—We are glad to know that the formula answers your purpose so well, but cannot give more definite information regarding the bromide as it depends on the nature of the water and other conditions. Too much tends to produce the greenish tint to which you refer, and too little to a slight discoloration of the whites. Try to hit the happy medium. The prints you send are really fine and we are sorry that the model objects to their reproduction. We shall be glad of the promised specimens.

J. E. CHALMERS.—We never heard of the developer to which you refer and should never think of using one that we did not make up ourself or the composition of which we did not know. You may take it for granted that the man who has secrets to sell, connected with photography, is worth about as little as his secret, which is a good deal below possible estimation. In your "Figures, Facts and Formulæ" you will find everything that you want.

Carbon Printing.

H. R. WATSON.—The articles on carbon printing you want will be found in our August, September and October, 1903, volume. We have generally used the tissue prepared by the Autotype Company, but believe the other tissue on the market to be very good. We know that several of our readers have made excellent prints without other instruction than that to be found in the three articles referred to.

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PORTRAIT OF A CHILD.

Meredith Janvier, Baltimore.

THE
AMERICAN AMATEUR PHOTOGRAPHER.

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AN IDEAL VACATION SPOT—YOSEMITE.

By W. E. COGSWELL.

Ere this reaches the readers of the "Amateur," many of us will have returned from our summer vacation, or at least have decided upon the locality; but winter will come and go, spring will come and then—summer, when again we shall begin to speculate on where to go for an outing. The particular place selected depends usually upon the taste of the individual. One party goes away for a quiet rest; another to enjoy the pleasures and discomforts of camping; another to fish; another to ascend mountain tops, and still another to photograph. One place to suit the individual taste of all is perhaps hard to find. However, there is one that approaches very near it, and we who live in California have it practically at our very door—the grand old Yosemite. It is the ideal spot for all, but especially for the photographer and the artist. We can return here year after year and always find something of interest, something new. It is safe to say that no place in America can afford

a greater variety of views—certainly no grander—perhaps no place in the world. One who has never visited

YOSEMITE FALL (2,600 feet.)

W. E. Cogswell.

gurgling onward to the river—to the



How long to remain in Yosemite depends largely on the time at our disposal and the size of our purse. A fair idea of the valley can be obtained in three or four days, but serious photography demands a much longer time. A month could be put in, and then all would not be seen.

If the time is limited, the jaunt to Glacier Point should at least be taken. The trail winds in, up and about the side of the valley, gradually unfolding new and wonderful views, which cause us to frequently stop in admiration. The trip is long and tiring, but all that is forgotten on our arrival at the top. Here, as we rest upon the piazza of the Glacier Point Hotel, we gaze upon a panorama whose equal is not found in the world. Before us are Half Dome, Cloud's Rest, Cap of Liberty, Little Yosemite, and the entrancing leap of the Vernal and Nevada Falls; in the background the high Sierras covered with snow. Of course we go to the iron railing and look down into the valley over 3,200 feet below. As Derrick Dodd expressed it, "It causes spiders of ice to crawl down one's spine." A horse and wagon is dwindled to a mere spec; an orchard has the appearance of a checker board, and the beautiful Merced River, the resemblance of a twine.

Another trip that should not be omitted is the one to the Vernal and Nevada Falls—a much easier climb than the one to Glacier Point. We strike the trail at the base of Grizzly Peak, and soon we are presented with sublimely delightful pictures of the rushing, boiling Merced River after its wild leap over the falls. In admir-

YOSEMITE FALLS.
(From a mile distant.)

Yosemite can imagine its wonders; one who has can never properly describe. Perpendicular walls and frowning cliffs tower 3,000 to 6,000 feet above, the height of which is even more pronounced when white, fleecy clouds are floating in the sky. Over these walls leap magnificent waterfalls a distance of 300 to 2,600 feet. An enormous variety of shrubs, beautiful ferns and flowers, with giant oaks, pines, cedars and firs, lend enchantment to the scenes, while rippling, sparkling streams continually cross our path and go murmuring,

VERNAL FALL, YOSEMITE (350 feet.)

W. E. Cogswell.

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ENCHANTMENT POINT.

on the trail; this time a narrow, rocky path, in many places hewn out of the side of the solid granite wall, and wide enough only for us to travel single file. Clambering hurriedly through the almost blinding mist and spray, we obtain a beautiful side view of the fall, and soon thereafter we arrive at the top. As we approach to the extreme edge of the fall, the eye catches the water, as it gracefully slips over the brink, and follows it to the rocky pool below, a crashing, roaring mass of scintillating crystals.

There are other wonders yet to come. We continue on our way past Emerald Pool and the Silver Apron, where the water spreads out and rushes over the smooth, bare granite at the rate of about sixty miles an hour. Presently we come in sight of the glorious Nevada Fall, a magnificent leap of over

THE THREE BROTHERS, YOSEMITE.
(3,820 feet.)

ation we proceed, wondering what is coming next, when a turn in the trail leads us across the stream and we stop upon the Register Rock Bridge and obtain our first view of the Vernal Fall. Who can describe it? With the roar and turmoil of the rushing water under our feet, there is an impression of grandeur almost unequaled in Yosemite. But from Lady Franklin Rock, a little further on, is presented the best view of the fall, a vertical drop of snowy white water 350 feet. With sparkling brightness it crashes into the rocky pool at its foot, sending out vast clouds of finely drifting spray, out of which burst as beautiful rainbows as ever were formed by water and sun.

Having viewed the fall from below, we are now more anxious to note the effect from the top. Again we are

WASHINGTON TOWER.

W. E. Cogswell.

600 feet. In form this fall differs from any other in the valley; while it shoots over the precipice in a curve, it soon dashes against the polished side of the granite mountain wall and is then spread out into a sheet of snowy whiteness, gradually widening in its descent, until it reaches a width of

water, as it rushes over the crest, has all the appearance of a river of diamonds, changing instantly, as it drops, into an immense shower of gem-pointed rockets.

Yosemite is an excellent place to study lighting, but a difficult place to photograph. One amateur that the

EL CAPITAN.

100 feet or more, as it thunders into the angry pool.

Although the Vernal is considered to be the favorite fall with the majority of the visitors to the valley, yet in the Nevada there is a fascinating grandeur that charms our every emotion. The view from the top is one never to be forgotten. The

writer met had made over 300 exposures, but he afterwards learned that on development about one-fifth were found to be only fairly good. The haze, the altitude, the extreme distance of many of the views, with a dense non-actinic foreground, deep shadows and intense high lights, present a perplexing problem to the man

**VIEW FROM
ARTIST'S POINT.**

W. E. Cogswell.

**NORTH DOME
AND
ROYAL ARCHES.**

W. E. Cogswell.

**THE THREE
GRACES.**

W. E. Cogswell.

behind the lens. There is usually difficulty in selecting the right point of view. A change of a few feet in the camera may bring us behind a tree or an immense rock, or face to face with a solid perpendicular granite wall hundreds of feet high, or to the edge of a precipice which drops 1,000 or more feet below. There are only about three hours in the day to work successfully. Each point of interest has its particular time to photograph, and if you miss that time, you lose the view.

The photographic necessities required on a journey to the valley consists in plenty of plates, mostly isochromatic, together with a camera of the long focus pattern, not less than 5 x 7 in size, a good ray filter and a variety of lenses of different focal lengths. The writer was equipped with the above-mentioned size, and found it with a dozen plates sufficient-

ly heavy in a climb up a long, steep, dusty, zig-zagging trail. His lenses consisted of a set of combinations, producing focal lengths of 8, 10, 14 and 18 inches, with a Bausch & Lomb ray filter, the standard solution being reduced about two-thirds. To those who are prone to use color valueplates, even without the ray screen, he desires to say that their use and comparison with ordinary plates on this journey will certainly demonstrate to the most biased mind their superiority.

Just a word, in conclusion, about the illustrations. In nearly all cases orthochromatic plates were used, the speed of which, according to Wynne, is ninety. A light color screen was usually employed, except in views of falling water, and the exposure was one-fifth second with f 16. No claim is made that the photographs are perfect; they simply show what "might have been."

HALF DOME, YOSEMITE, (5,000 feet.)

THE DEAD GIANT, (31 feet in diameter,) TUOLUMNE BIG TREES.

NEVADA FALL, (700 feet.)

W. E. Cogswell.

PORTRAIT.

Meredith Janvier.

MEREDITH JANVIER, PORTRAITIST.

Away down South, in the little town of Towson, Maryland, there resides a brilliant young lawyer—Osborne I. Yellott—whose name is not unknown to fame in the world of art, he having been a frequent exhibitor at many of our prominent salons and exhibitions. But this story does not have to deal with him, further than to give him due credit for being the discoverer of another promising star—Meredith Janvier. Fellow students and friends, it was at the suggestion and advice of Mr. Yellott that Janvier forsook the mustiness of the law office for the more congenial profession of photography. Establishing himself in Baltimore he soon made a name for himself, and has lately built himself a studio in the fashionable section of that city — a studio that deserves a chapter to itself, being constructed on the most modern ideas, with two massive lights capable of giving any desired effect.

Meredith Janvier is a photographer of whom Baltimore is justly proud. He is making very rapid progress, and the treatment of some of his recent work is broadly sympathetic, the figures being characteristically portrayed and showing considerable knowledge of composition and technical skill. Janvier's portraiture is of the normal, straightforward kind. He is no extreme tonalist and does not strive to make his pictures resemble old masters. He apparently strives for a fresh point of view. He does not allow himself to be hampered by the conventional treatments of long ago, nor does he follow in the foot-

steps of our leading professional photographers. Still experimenting, he has not yet found his own *forte* or *style* like Stein and Strauss, for instance. His work betrays, however, a decided personal feeling, a desire to be independent in his interpretations, considering in his own way the subjects that are placed before him.

His portrait of a young man sitting in full profile is a good example of his latest work. The pose is quite unusual and handled with more than ordinary skill. The way in which the details unite to form a pleasing whole make the picture particularly valuable as a portrait study.

A distinct success has he scored in his depictions of children. They are undoubtedly his *forte*. Some of his children's portraits reveal a fine sense for contrast and texture — qualities that are often absent in the work of older and more experienced photographers. Extremely simple in composition, yet carefully studied out in line, natural in their pose, well modeled and mellow in tone, they have quite a charm of their own.

A picture that will also interest is his portrait of the lady with a muff. The face looks a trifle flat, but its tone value is correct and its expression well observed. What people of taste want in a portrait is not so much the literal reality but a subtle fugitive expression that animates the features without marring the likeness. Specially noticeable also is the rendering of the background. Joshua Reynolds said that the background was the most difficult part of a portrait, and it seems that there is a good deal of un-

possesses good taste; has a keen knowledge of human nature, and is, apparently, a hard worker. Such of his work as we have seen is rational and vital. His seriousness of purpose can not be doubted, and he can congratulate himself that he has not yet acquired any mannerisms. The simpler his means, the more reserved and carefully considered his method of expression, the more ardent his search for the essentials of portraiture will be in his future career, the more completely will he control his chances for reaching the topmost rung of his chosen profession.

It is only justice to say that the engraver has failed to reproduce the rich tonality of the prints, especially that of the child portrait.

(Copyright 1905.)

Portrait. Meredith Janvier.
EDW. UFFINGTON VALENTINE.

realized truth in his statement as suggestive and pleasing backgrounds that look natural and not faked are very rarely met with.

Another good picture is his portrait of Edward Uffington Valentine. The collar and cuff are perhaps a trifle too prominent, but the attitude of meditation is well chosen. It shows that the sitter is a thinker, and to be able to reveal the character of the man in the pose is no mean accomplishment. It should be the final end and aim of all portrait photography.

It is outside the purpose of this article to go into a detailed criticism of Mr. Janvier's work. Suffice it to say that he is on the right road. He has mastered the technical requirements of his chosen profession; he

PORTRAIT.

Meredith Janvier.

THE ELEMENTS OF PICTORIAL COMPOSITION.

The claim is sometimes put forth that there is no such thing as "Laws or rules of composition," but Dr. G. W. Allyn, in the June number of this magazine, applies the physiological laws of vision to the first principles of art, and clearly shows that there are tangible reasons for the existence of a code of rules or laws which may be followed in the building up of a successful or pleasing work of art, and by which we may approve or condemn the work of the artist.

The scarcity of what we would term a good pictorial photograph is in most cases due to a lack of knowledge of these laws of composition. It is the stumbling block on which most beginners and even more advanced pictorialists are apt to fall.

Technical proficiency can be acquired, if one possesses the necessary share of patience, perseverance and adaptability. Also the choice of subjects should prove a comparatively easy task to the camera worker. He has to deal with actualities; the subjects actually come to him, and he has merely to translate them by means of a mechanical process, and not like the painter by the less reliable, though more flexible, eye and hand. All the photographer needs to permanently "fix" a good subject is good taste, or rather judgment, at the right moment. There lies the rub. What does good taste and judgment in pictorial matters consist of? Largely, it may be taken for granted, in an unconscious or conscious knowledge of the laws of composition. As long as the mind acts unconsciously of this knowledge

it is merely a matter of feeling or good taste; as soon as we become conscious of the knowledge it becomes judgment or selection.

Good taste, or the unconscious feeling of what is correct or best, is often implanted by Nature, as some people are born with the gift of poetry or song. Good taste can also be cultivated and invariably improved upon by the study of a large variety of good pictorial work, analyzing each picture and in trying to discover the reason why and how such work impresses one as being beautiful.

The conscious knowledge of judgment or selection is not to be acquired without first a knowledge of the fundamental laws of composition or the faculty of seeing correctly. Dr. Allyn's article begins at the beginning, and shows us that the rules of composition are based on the fundamental laws of optics, and this A, B, C of art should first be read and understood by the student who aspires to the real mastery of the subject.

Good taste and judgment, therefore, not being necessarily natural gifts, they can be cultivated as other faculties, and genius, in this as in other lines, is only another word for hard work and application. It is a matter of self-education, of keeping one's eyes open, of learning wherever we can, of continually enriching one's store of form knowledge, and of reasoning out for one's self why one likes one art-expression and dislikes another.

Now, what should a beginner, who is just making his first photographic explorations, do to improve his judg-

ment whether the subject or scenery before him contains the elements of a good picture or not? My first advice is the same as the painter, William M. Chase, gives to his pupils: Make a small empty frame of blackened cardboard or any convenient material; carry it with you whenever you are photographically inclined, and look

think, so it is, but shift the frame a little to the right or to the left or upwards or downwards. As the boundary lines change the picture changes. Do you like it better now than before? Weigh it in your mind, there is no hurry; you are only saving plates, and at the same time making the most valuable studies in compo-

PORTRAIT STUDY.

Meredith Janvier, Baltimore.

through it at those things that interest you. It will help you immensely. You will begin to see everything in pictures, clean cut by the four boundary lines of the frame; and, as soon as you move the frame from one side to another, all nature will seem to you to be divided into innumerable pictorial fragments. There is a good motif, you

sition. Select finally what appeals most to you. Try to forget all you have seen before. Don't try to imitate any painting or picture that you may have in your mind. Obey your own feelings absolutely. If the fragment of nature which you see through the frame conveys something to you, well and good; if it doesn't, try again.

This is, of course, a very primitive way of getting at the laws of composition, but it is a very good one, and it will not play you false as long as you have confidence enough in your own abilities. At the same time make the most of your environment; visit picture exhibitions and picture galleries whenever you can. If you live in a small town, study book and magazine illustrations—everything will help. Try to analyze the arrangement of each picture and parts of the picture, why this or that part has been accentuated or isolated from the rest; study the line arrangement, the planes, and the gradation of one tone into another. Use your critical acumen, not necessarily to find faults or to accept as infallible the picture before you, but simply to develop and perfect your own faculties.

The student will soon learn that every pictorial composition must have a *point of interest* to which every other part must be subordinated. That this point of interest should never be in the centre of the picture (this applies to portraiture as well as to genre or landscape). He will find out that two points of interest are always disquieting in their effect, as the eye wanders restlessly from one point to the other. A similar effect of restlessness is produced by too many spots of equal size; they only grow into a harmony if arranged in some geometrical shape. Of two large planes, one must always be subordinated to the other, and it is in most cases the smaller one. If they are almost alike in size it is the one which is most compact and least irregular.

If you want to go deeper into the subject procure a good book on composition and study it. They are rather

scarce, but can be found. The two most helpful works on composition at the disposal of the American art student are at present, "Pictorial Composition," by Henry A. Poore, and "Composition," by A. W. Dow. It is frequently remarked that these books are too elaborate for the beginner. The abundance of information contained in them is apt to prove confusing. Each principle advanced necessitates an endless amount of experimenting before it can be fully understood. And there the trouble begins. Beginners have seldom the patience to devote weeks of study to one book. They will either try to peruse the book like a novel, which will surely prove unprofitable, or engage in a few experiments to unfathom what "the balance of isolated measures," or the "principle of principality" mean, and thereupon throw the book aside, considering the task a too laborious one. And it is not at all necessary that the beginner should know all these things. The common fault of the authors of such books is that they make too much of their subject; they subdivide it and subdivide it until the reader does not know any more what they are driving at. They are not practical — at least for beginners, and they are written for beginners (as artists and advanced pictorialists try to solve these problems for themselves). Still there are some of our leading photographic lights (salonists) who modestly ascribe their success to Poore's book, some of the chapters of which they will read over and over again. And right here is the key to the situation. Such a book is the essence of the knowledge of a man who has made art his life study. How vain it is to suppose that

a superficial reading of such a book will leave anything more than the slight impress of chaotic ideas on the untutored mind. But by re-reading and digesting chapter after chapter, the teachings and principles therein contained become a part of our own thoughts and unconsciously exert their influence on our work.

In this article it is, of course, impossible to give more than a general idea of a fraction of this subject; but I will try to make plain to the average reader a few of the principles involved, which, if understood, can be used with profit by all beginners.

There are only three systems of composition:

1. The laws of symmetry as practised by the Greek.

2. The principles of geometrical construction as developed by the old masters.

3. The unsymmetrical devices as introduced by modern impressionism (a system that evolved from the canons of Japanese composition and the haphazard fragmentary representations of the camera).

Symmetrical composition, the perfect balancing of parts, making one side the exact replica of the other, is largely architectural. Symmetry is the fundamental law of all architectural constructions (the only exception being furnished by some of our modern office buildings). It is also the essential quality in all industrial art products (at least as practised by Western nations). In the range of pictorial construction it is, however, almost useless, except in strictly decorative designs. In the work of the early Italian masters, when painting was largely architectural, we find many examples of this kind of composition;

but in later periods, although its influence was never entirely effaced, it gave way almost entirely to a more elaborate and pictorial style of arrangement.

It will only be necessary to study some really genuine works of art, like Leonardo da Vinci's "Last Supper," Raphael's "Sistine Madonna," or Titian's "Entombment of Christ," to comprehend what an important part *geometrical construction* played in the pictorial inventions of the old masters. The whole success or failure of their work, the sentiment, the character, the triumph of soul over matter, hinged on composition in these times. How marvellously do all the lines in Da Vinci's picture converge to the central figure of Christ. He made the laws of perspective the laws of this composition. More frequently, however, he as well as most of the old masters applied, with preference, the triangle, the circle and the ellipse, giving them full sway to reign in supreme beauty over the creations of their brain.

As the pictorial quality in painting advanced, Titian proved that an accurate juxtaposition of colors and the relation of their tones can be just as valuable for the making of a good picture as perspective and geometry. Michael Angelo regarded architecture and the plastic element of sculpture as the foundation of great paintings, while Rembrandt believed that the massing of light and shade was sufficient to produce a masterpiece. Each of these men excelled in his style of composition, which had become a part of their individuality; and one was as good as the other. The situation has somewhat changed in modern times. Landscape painting has become more in vogue, and with it pictures of ob-

long shape. Geometrical construction has been more or less abandoned, only the ellipse is still in great favor among landscape painters.

Composition is, by some, no longer considered absolutely essential. It is even disregarded alike by realists and impressionists, or at least subordinated to other qualities. They want to represent life as it is, or as it appeals to them, and claim that nature can not be improved upon. A faithful reproduction of what they see is all they desire. They claim they work on broader principles, and even assert that composition is no necessity; that there are no iron laws to go by, and that the artist works out his own salvation unconsciously. On this point I beg to differ. There is no such thing as a good picture *without* composition. Even the paintings of the extremest impressionists show a perfect balance of parts. Only the principles of composition have changed.

The modern artist looks at life from a different view point. Photography, particularly the instantaneous photography of movements, has trained his eye to note transient effects more clearly than hitherto. His aim is no longer to give a perfect pictorial illusion of an object, but rather to *suggest* it. While the artists of the sixties and seventies were working out this new problem Japanese art suddenly became known, and, strange to say, it was just what the Western artists were looking for—an art which rather suggests than actually depicts a subject or idea. Here was a branch of art that was almost antipodal to that of the old masters. Its various elements, notably its parallelism of lines, its continual repetition of forms with slight variation, its wayward caprice

of emphasizing detail here and scorning it there, its system of curved lines and its harmony of space proportion were all qualities which had the charm of novelty; and they were cheerfully adopted by the Western art workers, and to such an extent that nearly two-thirds of all artistic productions of the last thirty-five years show a trace of one or other of these peculiarities.

Arthur W. Dow's book on "Composition" gives a fair analysis of these principles, but he is wrong if he believes that by adopting Japanese methods of composition we become more intuitive and less scientific. It is an illusion. Nobody who has studied the rigid canons of Japanese art will make such an assertion, for he will have found out that the fundamental process of so-called space-art and its arrangement of lines and masses is as scientific as the theories of the old masters.

Further investigation will determine that modern composition has been subdivided into four styles of composition, viz.:

Line composition.

Light and shade composition.

Space composition.

Tone composition.

Neither of these styles is absolutely independent of the others; they merely specialize. Each one emphasizes a certain quality and tries to make the most of it.

A peculiarity in chiraoscural composition is that the lighter part of a picture easily assumes the appearance of being the larger one even if its ratio of space is decidedly smaller than that of the darker section. The proportions of lighted planes should, therefore, be reduced to their minimum. The Italian masters gave to it

only one-fifth of their canvas; Rembrandt reduced it to one-eighth, and Whistler, in some pictures, to one-sixteenth. The better connected the darker masses are, the more delicately the lighter ones lead the eyes from one point to another, so the more harmonious and beautiful will be the pictorial effect.

Space composition is largely of Japanese origin. Whistler excelled in it. It depends largely on a skillful division of the space at one's disposal into distinct geometrical flat-tinted shapes that perfectly balance each other. The flat tint that contains the point of interest and gives the keynote to the general effect generally occupies the smallest part of the composition.

Tone composition is subordination of every other quality to the general tone of the picture. It is a style very much in vogue at present, and may be said to proceed from our admiration of the old masters. We have grown so accustomed to the dark, mellow tonality of these old masters that we can hardly imagine a good picture without it. And that is the reason why so many modern painters strive to accomplish by means of varnish and glazes what age and dust has done for the old masters; while, following in their footsteps, the photographer strives to obtain the same effects by staining or other manipulation of his prints.

And what can the beginner learn from the advanced pictorialists? Not overmuch. Masterpieces of composition in photography are few and far between. The majority have never taken it half seriously enough, but have simply imitated the painters in a more or less careless fashion.

Eickemeyer and Dumont, whose "Solid Comfort," "The Clarionet Player" and "The Prescription" show acute observation and artistic feeling, are principally story tellers of the old school, and their compositions are largely deductions of the methods of the genre painters. The up-to-date criticism, which is distinctly on the side of innovations, may be opposed to such old methods, yet what is really good is good at all times, and to that category belongs the work of these two men. One has merely to read Eickemeyer's "How a Picture was Made" (referring to his "Vesper Bell") to realize what hard and severe training he has gone through, and what strenuous study he has made in that direction.

Alfred Steiglitz excels in space composition ("Fifth Avenue," "Scurrying Home," "On the Banks of the Seine," and others). Alvin Langdon Coburn favors the Whistler trick, and often only uses two flat tints, a dark and a middle tint. Also F. Holland Day (in his "Miss Mary Devens," for instance) and Gertrude Käsebier, in several of her portraits, show how cleverly space can be broken up into parts of various shapes.

Light and shade composition (in the sense of Mauve or Corot) is rarely accomplished in photography. The distinction between light and shade in photography always lacks vigor, and what is more serious, correct values. The first shortcoming is a mechanical one, the second due to ignorance. Stieglitz's "Old Mill" is a good specimen of light and shade composition (although from the point of subject a sentimental platitude). A better one, because more rhythmic in its massing is Käsebier's "The Manger."

Steichen and Coburn also manipulate chiaroscuro effects with success, and this because art has been their study and the camera merely adopted as a means of expression.

Line composition is still rarer. Among the few pictorial photographs that can claim this quality are Adelaide Hanscomb's "Mother and Child" studies, and Coburn's "The Dragon" and "Gables," two simple compositions of rare linear beauty. Other pictorialists may make bold attempts, but it is largely due to the model when they succeed in suggesting it.

In tonal composition our pictorial photographers score their greatest triumphs. Day, Dyer, Clark-Wade, Coburn, Käsebier, Keiley, Steichen, Bennett, White, are all ardent competitors for the harmony of tonal effects. The work of Day and White are well worthy of study in this respect. Day's tonal nuances in many of his portraits and some of his foreign types are so subtle and fugitive that any painter could be proud of them; while White's tonal schemes are managed with such delicacy of sentiment that they lend a peculiar charm to all his work.

WORDS FROM THE WATCH-TOWER.

BY WATCHMAN.

I am sometimes twitted with lack of charity in dealing with the professional photographer, but never said anything so strong as the following, quoted from his oldest and best friend, the *British Journal of Photography*. Speaking of P. O. P., it says, "This is a paper used in, say ninety per cent. of the businesses in the country, yet it is doubtful if more than five per cent. of those using the paper have any sound idea as to the uniform working of it, or know how to locate any difficulty when it occurs." Such ignorance, after so many years of constant use of the paper, is almost incredible, but the B. J. ought to know.

* * *

Who could have thought that at this time of day the editor of a journal devoted to the interests of photography, and mainly to the interests of the professionals at that; and a contributor to its pages, could have been found—the one to write and the other to print the following palaver on certainly

the most frequently used article in connection with the practice of photography, and in double-leaded type at that?

"THAT NEW FIXING AGENT."

"We heard a great deal about the claims of thiosulphate as a fixing agent to be used in the place of hypo, some years ago. I looked the matter up the other day trying to find out why it had never come into use. It was hard to find any mention of the matter, but I finally found that it was not the glowing success that was at first predicted. The chemical was found to have solvent qualities varying with the different silver salts. While it had little or no effect upon iodide of silver, about one-fifth that of hypo upon silver bromide, and upon silver chloride alone was its action equal to hypo. Under these conditions, it would only be of value for the fixation of negatives or prints on a chloride emulsion. Nearly all of our commercial plates

contain iodide of silver and many of the papers the chloride salt. For this reason the chemical was not a practical substitute for our old friend hypo."

* * *

The editor of *The Amateur Photographer*, in his "Practical Lessons for Beginners," the forty-fourth lesson, has this to say, in speaking of backed plates: "Why do clouds disappear in ordinary exposures? Because the sky, etc., is over-exposed.

Very well, then. With a backed plate it is almost impossible to over-expose, the superfluous light being absorbed by the "backing" as fast as it gets through to the back, so if we used backed plates we are less likely to over-expose the sky and so get the clouds "burnt up," so to speak." Is this so? We all know, of course, that the light reflected from the back has some effect, but never, at least I never dreamt that it was to such an extent as is here implied.

THE COMING LONDON PHOTOGRAPHIC SALON.

The London Photographic Salon, 1905 (thirteenth year), will be held at the Royal Water Color Society (5 A, Pall Mall East, S. W.) from September 15 to October 21, 1905.

The aim of the Linked Ring is to exhibit only photographs displaying originality of conception expressed in a pictorial manner.

All the work of American photographers destined for the London Photographic Salon must be submitted to a selection committee sitting in New York, and composed exclusively of American members of the Linked Ring, whose names are: C. Yarnall Abbott, A. L. Coburn, F. Holland Day, Mary Devens, W. B. Dyer, R. Eickemeyer, Frank Eugene, Gertrude Käsebier, Joseph T. Keiley, Margaret Russell, Eva Watson Schutze, Sarah C. Sears, Edward J. Steichen, Alfred Stieglitz, Edmund Stirling, Clarence White.

The pictures approved by the American Select Committee will be accepted for hanging without passing the London Jury.

Pictures for this committee must be addressed as follows:

For the London Photographic Salon,
MR. ALFRED STIEGLITZ,
Care of Geo. F. Of,
3 East 28th Street,
New York City,

and must be delivered at that address, carriage prepaid, together with accompanying entry form or list by July 24th. Rejected prints will be returned promptly at the expense of the exhibitor. Pictures that have already been exhibited in London will not be accepted.

Pictures entered in any other exhibition open in London at the same period are likewise unacceptable. On such pictures as are sold a commission of 15 per cent. will be charged by the Salon.

Prints must be separately framed. Each frame must bear name of exhibitor, number and title of picture, and price, if offered for sale. A corresponding record of particulars, on official entry from (or list where ex-

hibitor is unable to obtain such form), must also be furnished.

While it is desirable that all entries should be sent framed, persons desiring to submit unframed prints may do so.

Such unframed prints must be so mounted as to protect them from injury, and be properly labeled with title, address, etc., to correspond to their entry form.

Such unframed prints as are accepted by the jury will be framed at

exhibitor's expense by Geo. F. Of, 3 East 28th Street.

There will be no charge to exhibit or for the forwarding of exhibits from New York to London and their return to New York, only forwarding charges to exhibitors, will be express charges from New York to home of said exhibitors.

Joseph T. Keiley, for Alfred Stieglitz.

June 19, 1905.

NOTES.

BACKING PLATES.—A. H. Blake, in *The Amateur Photographer*, says, "It is agreed now on all hands that much loss is incurred in quality in all unbacked negatives, and that backing the plates should be the practice of every earnest worker." To this we heartily agree, and never, if we can help it, use one without backing. It is generally thought that backing is essential only with subjects likely to produce visible halation, but he who will carefully compare negatives of any ordinary subject on plates backed and unbacked will never again, if he can avoid it, use the latter.

THE LIBERAL USE OF PLATES.—*Photography*, in a résumé of a lecture by Rev. H. W. Dick, before the Manchester Photographic Society, tells something of how he produced his picture, "Morning Light," a child sitting up in bed and looking with great interest to the light streaming through the window. Here is what it says: "Before Mr. Dick was at all satisfied with the results he had exposed *not less than five dozen plates* at different

times and under different situations, having moved his accessories about from room to room until he felt the desired effect had been secured." The italics are ours, meant to direct special attention to the lengths to which a true artist will go to secure the expression of his conception. In the course of the lecture Mr. Dick defined art as "giving objective expression to subjective conception" — a very neat and satisfactory definition.

ORTHOCHROMATIC PLATES.—One of the silliest reasons given for the non-use of color-corrected plates is that for some subjects they are no better than non-corrected or ordinary plates, admitting at the same time that they are quite as good. We had rather pin our faith on the following from the well-known F. H. Evans: "The lesson seems to be that it is unwise to use a non-corrected film on anything but black and white subjects; and to use a good screen whenever the subject is above the average in difficulty if the fullest rendering of truth and beauty is desired."

THE CAPACITY OF DIFFERENT PRINTING PROCESSES FOR RENDERING GRADATION.

BY WILLIAM GOODWIN,

*Hon. Secretary of the Glasgow and West of Scotland Amateur
Photographic Association.*

When one considers the enormous amount of literature bearing upon photographic subjects which has been poured forth in ever-increasing volume for so many years, it seems almost hopeless to find anything that has not already been fully dealt with and discussed. Nevertheless I cannot recall any systematic attempt to compare the characteristics of the different printing processes in general use, and I am about to show you the results of a number of experiments which may bring the matter before you in a new way, though the subject may not be new. It is of course common knowledge that different printing processes give different results from a given negative, but the object of my paper is to show the character and extent of the difference, and if possible to indicate what kind of negative is best suited to each process.

At the outset the investigation seemed a comparatively simple matter. It was only necessary to prepare a negative having a series of gradations bearing a known relation to each other, and from them to make prints, carrying the exposure to such a point that the deepest shadow gradations merged into a uniform depth, showing that the limit of the process had been reached. The relationship of the gradations, however, presented unexpected difficulties. The most obvious plan was to adopt the

Hurter and Driffeld method of exposing a plate in strips for periods in geometrical progression, thus on development securing gradations in corresponding ratio. Experiment proved, however, that in a sufficiently long scale for my purpose there would probably be portions of under-exposure and over-exposure at the respective ends of the scale, and it did not seem to me possible that any one inexperienced in photometrical work could measure these opacities with any degree of accuracy. Having failed to get what I wanted by purely photographic methods, I tried numerous experiments with other materials, and finally found a pure white tracing paper which gave a long and useful scale of gradations when superposed in successive thicknesses. The gradations are so proportioned that the opacity is about doubled at every second step, but unfortunately there is a very slight departure from that simple rule which would cause the higher opacities to be overestimated. It was necessary, therefore, after finding the range of opacities which would actually come into use in my experiments, to measure their value by actual tests for each one. The method was simple but somewhat tedious.

Using a certain make of bromide paper, a two-grain amidol developer, and a distance from a gas flame (full on) which would give a decided tint

to the smallest opacity after five seconds' exposure, such an exposure was given to a small piece cut from a sheet of the paper. That was removed, and the rest of the sheet exposed behind the screen for a time estimated to be correct for some other opacity. The whole being developed together, if gradation No. 1 which had received five seconds' exposure appeared together with gradation No. So-and-so which had received the longer exposure, and if both ultimately reached the same tint when development ceased, it was reasonable to conclude that they had received the same amount of light. Thus gradation No. 1 with five seconds gave the same tint as gradation No. 15 with 320 seconds, therefore their relative opacities are as 1 to 64.

Having tabulated these opacities, it only remained to print as many different kinds of papers behind the screen as I could obtain, and to compare the results both as to the number of gradations rendered by each and as to the character of the gradations.

For testing printing-out papers several screens were required, and having made a number, four were selected for use which proved to be exactly similar in time of printing. For development papers one screen only was used throughout, and whenever comparative tests were made, screens cut from the same sheet of paper were used.

I have dealt at some length with these screens because the whole value of my experiments turns on the correctness or otherwise of the means of investigation, also because it seems to me that similar screens should be of frequent use to photographers not only for testing papers, but for making comparative speed tests of plates, test-

ing plates for halation, latitude of exposure, etc., also for use as actinometers in printing.

Having secured the means of testing the papers, I turned my attention to plates, as it seemed desirable to find what gradation a plate is capable of giving. Several popular brands were chosen and exposed behind one of the graduated screens. A four-grain amidol developer was used, and development was prolonged till the denser parts were completely through to the back and all developing action seemed to have ceased.

Very striking differences were found between different makes of plates. In some, quite a number of the most exposed divisions of the scale had run up against the glass, so to speak, and were equal in opacity, while in some cases signs of reversal could be seen when the exposure was sufficient to bring out nearly the highest opacities of the scale. In other cases nearly the whole scale was clearly rendered, one plate in particular giving the entire scale clearly, without halation. Of course all the plates were backed.

As the opacity of the gradations on these plates could only be ascertained by direct experiment, tests were made on the same principle as the tests of the screens, and the range of opacities was found to range from 1 to about 700 in average plates, and 1 to over 1,000 in the best, and these opacities are due to silver alone, no developer stain being present. In these figures I take as one the faintest deposit that has any printing value. Clear glass may be disregarded, as I do not think any really good negative *has* any quite clear glass.

As it seemed improbable that nega-

tives would contain anything like such extreme gradations as these, I proceeded to test the gradations of some of my own, the test being the same as before, viz., finding the exposures required to give an equal tint to the deepest shadow and the highest light which would be required to print. It seems needless to consider the *extreme* opacity to be found in the negative, as there may be a patch out of all relation to the rest of the negative and which could never be required to print. I therefore considered as the highest light that which would show on a P.O.P. print as a slight tint before toning and as pure white after the print was finished.

Now, let us see what degree of contrast the different processes are capable of rendering effectively.

PRINTING-OUT PAPERS naturally claim first attention. I show you a number of prints taken from my graduated screens on different makes of P.O.P., some well-known, others less so. It would serve no good purpose to publish the names of the papers tested, as my purpose is not to compare different makes of paper, but merely different processes. For private information the name is given under each print and its range of gradation. It would be absurd to say that any one paper is good and another bad. All are good for some particular kind of negative, and no really bad paper could possibly remain on the market. Many of you, however, will probably be surprised to find so much difference in the printing capacities of even gelatine P.O.P.

Amongst all the printing processes now at the command of photographers, those which give a fully visible image in the printing frame un-

doubtedly remain most popular, especially those gelatino or collodi-chloride papers familiarly known as P.O.P. They are all capable of rendering a fairly long range of gradation, but amongst the various examples I show you, it is noticeable that one kind differs from another, sometimes to a considerable extent, and that even the less enterprising photographer who shuns carbon or platinum because he "likes to see what he is doing," will find some advantage in using more than one make of P.O.P. They differ in the extent of gradation they register, ranging between 1 to 15 and 1 to 20 tints on my screen, representing opacities of 1 to 64 and 1 to 256. That means that a negative possessing a large range of contrast may have all its tones registered on a paper of the latter class, while on the former class there must be blocking up of shadows or loss of detail in lights with such a negative.

A still more important difference, however, lies in the *steepness* of the gradation. Two papers may be found which register exactly the same number of gradations, but the depth of color attained in the deepest shadows may be very much greater in one than in the other. The discoloration due to one unit of light and twice that unit is not the same in all papers, and the difference may be illustrated by two flights of stairs, one having higher steps than the other so that one rises to a greater height than the other for a given number of steps. These two papers will give prints of a different character from any negative. If the negative contains the same gradations as the paper is capable of rendering the steeper paper will give the most "brilliant" print, but both prints will

be good each in its own way. If, however, the negative is flat, and *within* the scale of the paper, the steeper paper will give the better print. On the other hand, of course, the softer paper will best render a harsh over-developed negative, because the shadows will be lighter in tone, although they will contain no more detail; in other words, the print will be softer.

The gradation in all printing-out papers presents a certain important peculiarity. Examination shows that, in all the examples before you, there is a gradual decrease in the steepness of gradation towards the shadow end which becomes very marked in the deeper tones, where the difference between any two contiguous exposures becomes hardly perceptible. The explanation is simple. As the silver compounds darken during printing, the discolored particles act as a screen to those lying beneath them, so that the darkening of the latter is delayed. The greater the amount of darkening the greater the screening effect, hence the light of two tones tends to overtake its darker neighbor, and the contrast between them is less than the contrast between the corresponding tones of the negative used. The effect of this is to soften the shadows of the print and lengthen the scale of gradation, as will be seen by comparison with other classes of papers where this screening effect does not arise. At the other end of the scale there is also a somewhat abrupt falling off in the gradation not quite so easily explained. It will be noticed that the gradations *print out* clearly enough, but that they disappear, or are disproportionately reduced during toning and fixing. I ascribe the loss of these delicate tones

to the fact that silver chloride prints out more rapidly than the organic silver compounds which are associated with it, and which gives richness and depth of color to the print, hence the lighter tones consist mainly of chloride alone, which is more reduced during toning and fixing than the organic compounds. This seems the more likely because I have noticed that in these experimental prints the lightest tones—those which suffer most in the after processes—are, when taken from the printing frame, distinctly bluer in color than the somewhat darker tones adjoining. The conclusion is therefore inevitable that printing-out papers cannot possibly give a correct rendering of the negative, although their vast popularity indicates that they give a rendering which pleases the majority of photographers. No doubt the softening in the shadows is rather welcome than otherwise, while the abnormal gradation at the other end of the scale gives a certain sparkle or brilliancy which is equally desired.

The strength of the light in P.O.P. printing does not seem to affect the total range of gradation much, but it does affect its character. Printing in the sun considerably strengthens the detail in the lights. It seems that the stronger light causes the earlier formation of the organic compounds which I have already spoken of, so that the abrupt falling off in fine detail, due to the absence of these compounds, does not take place, hence the advice to print dense negatives in the sun is sound.

The surface of the paper has considerable influence on the rendering of gradation. It appears that when the coloring matter is spread throughout

a comparatively thick layer of transparent medium such as gelatine, there is a depth and transparency which is lacking when the particles are crowded into a thin layer. No doubt the gelatine acts as a varnish, preventing the surface reflections which rob the shadows of depth when the surface is "matt." Enamelling still further improves the depth of shadows and enables minute differences of shadow gradation to show themselves, which would be invisible even with the natural gloss of the paper.

There is a P.O.P. paper of foreign manufacture designed for printing negatives of very small range of gradation. It evidently contains a yellow dye, to which its peculiarity is due, and is made in several degrees of hardness. I do not know which degree the sample I have tried represents, but it gives a range of 1 to 12, thus equaling some of the gaslight papers.

Closely allied to P.O.P. we have the processes of printing in pigments, to which the general term

CARBON PRINTING

is applied. It is a peculiarity of this process that its range of gradation is variable at will, over fairly wide limits, by varying the strength of the sensitizing bath. An average bath of 4 to 5 per cent. of bichromate will give a range about the same as the majority of the P.O.P.'s, but for such a gradation a negative of a considerable range of opacities is needed to bring out the full value of the rich deep shadows which are characteristic of the process. If, however, the tissue is sensitized on a bath more diluted, the range of gradation is shortened and rendered much steeper, and the negative may be correspondingly thinner. On the other hand, tissue to suit

a negative of extreme contrast may be prepared by sensitizing on a bath of greater strength up to about 8 per cent. Beyond that strength trouble arises owing to crystallization of the bichromate in the film, and even at 8 per cent. I have noticed signs of it.

The gradations I have obtained are:

8 per cent. bath	- -	1 to 64
4 per cent. bath	- -	1 to 32
1 per cent. bath	- -	1 to 16
½ per cent. bath	- -	1 to 8

But these show carbon at its worst, as they refer to tissue twelve hours after sensitizing.

I regret that gloomy weather has prevented me from finishing my experiments with this process, but it is known that its range of gradation increases with keeping, and it is usually supposed to be at its best about four days old, when it probably is about equal to P.O.P.

(Note.—Since reading the paper I have made further experiments, and find that after keeping the sensitized tissue five days, the scale increases approximately as follows:

8 per cent. bath	- -	1 to 96
4 per cent. bath	- -	1 to 48
1 per cent. bath	- -	1 to 24
½ per cent. bath	- -	1 to 12

And after ten days—

8 per cent. bath	- -	1 to 128
4 per cent. bath	- -	1 to 64
1 per cent. bath	- -	1 to 32
½ per cent. bath	- -	1 to 16

The tissue was kept in an air-tight tin, and the temperature did not exceed 45° during the period of keeping.

In warmer weather it would probably "ripen" more rapidly. It is important, therefore, in controlling results with carbon to pay attention to the age of the tissue as well as the strength of the bath.)

The general character of the process seems to be that the detail in the higher lights is robust owing to the absence of any abnormal falling off, such as I have described in speaking of P.O.P., while in the shadows contrast is well maintained almost to the last gradation. There is, however, a little of the flattening already described, owing, no doubt, to the light having to penetrate more and more of the opaque tissue the greater the depth of shadow.

To some extent its characteristics must vary with the opacity or covering power of the pigment used, and the quantity of it in the tissue. I have used in my experiments black tissue, but for comparison have also tried sea-green and terra-cotta without find-

ing any important difference in gradation. There is, however, the difference due to color-contrast, the red print being, of course, distinctly lighter in tone throughout.

It is generally understood that for carbon printing with a normal or 5 per cent. bath, a "plucky" negative is required, yet it seems that the range of gradation and steepness is much the same as P.O.P. I think the need for a contrasty negative is due to the very vigorous rendering of detail in the lights, necessitating a corresponding vigor in the shadows; that is to say, the negative should employ a large part of the available gradation, otherwise the print may appear flat owing to the comparative strength of the detail.

(To be continued.)

ENLARGED NEGATIVES ON PAPER.

Enlarged negatives on paper are becoming more and more popular, and therefore we have pleasure in reproducing the following from *The Bromide Monthly*, by Mr. T. C. Graydon, promising that we have got very excellent results on the negative paper made by the firm that publishes that interesting little magazine.

"There is a certain charm about seeing an enlargement on bromide paper grow in the developing dish to a thing of beauty, but one has to be content with practically one process, though I admit that with the various surfaces obtainable in bromide papers and the various toning processes, one almost seems to have several; but to those who, like myself, have a sweet

hankering after carbon, an enlarged negative is an absolute necessity. It is just as easy to make as an enlarged print, besides, having once got the enlarged negative, one can easily print by contact on bromide paper if one wishes.

"Up to within the last twelve months I always used dry plates, and although one gets to know within a little what is the correct exposure, I found it always advisable to make a test exposure on a quarter-plate first, for one does not mind the waste of a penny when it will save eighteen-pence, which is the price of every 15 by 12. Now I use nothing but the "Rotograph" negative paper, and find it not only as easy to work; but I seem

to get cleaner results, and with less halation, which was a frequent bug-bear with glass plates; and, a still more important point, I can now make two enlarged negatives for the same cost as one on glass. This is not, of course, any consideration to the millionaire, but to the humble amateur, who has to earn his bread and cheese, it is important.

"Further advantages in the use of paper are that one can work up with a pencil on the back and very readily lighten a too dark shadow; it is unbreakable and very easily stored. To some the paper may seem to be a disadvantage, but personally I have not found it so, and I have never yet oiled it but once, and that was the first enlarged paper negative I made. Someone told me to use castor oil, and I did; but the way that oil sort of pervaded the house and clung to one was too much for me, and my beautiful negative was burnt and a fresh one made and left unoled.

"One of the chief faults in making enlarged negatives occurs in making the small transparency; this looks rather paradoxical, but it is true. If the small transparency is made like a brilliant lantern slide, it is impossible to make a good enlarged negative. The transparency must be as unlike a slide as possible, and should partake of the character of a negative, and possess no clear glass and no absolutely opaque high-light. I use an ordinary dry plate for this work, and give a fairly full exposure and develop with adurol. I keep the negative somewhat thin, and, above all things, I back the plate. and this, I think, is important.

For making the enlarged negatives, I always use adurol, also for the develop-

ment, and without any bromide, and get excellent gradation, without any large bare patches. I have tried both the normal and the extra rapid, and infinitely prefer the latter, though it naturally wants a little more care in ascertaining the exposure, which is always determined first by sacrificing a small piece of paper. First of all I used to use quarter-plate pieces, but now I cut one of the 15 by 12 sheets into eleven strips and pin a strip right across the easel and expose it for four different times, and then develop and fix and examine it by white light to see which gives the best result. I then give the whole sheet that exposure. This method has the advantage of ensuring that the trial strip is coated with absolutely the same emulsion as the whole sheets.

"The actual developer I use is the well-known one-solution formula; it is easy to make, takes up little room, does not stain and keeps well, and is so cheap that I never use the same lot of developer twice, and I use plenty of it.

"For use I mix one ounce of stock with five ounces of water, and when development is complete the negative is immersed without washing into an acid fixing bath, and pushed well below the surface to stop development instantly and to prevent stains. I fix for twenty minutes and then wash well.

"As regards the development, I have of late entirely adopted Mr. Watkins' time system, and I find that I always get exactly the same character of negative; he gives a factor of 5, but I only use 4, and thus get a little softer negative.

THE SECOND AMERICAN SALON.

Just as we are about to go press we have received from Mr. Curtis Bell, President of the American Federation of Photographic Societies, a copy of the Rules and Regulations of the Second American Photographic Salon. As the closing date for entries is October 31st, 1905, we hold over other matter in order to give all possible time for the publicity of the announcement. It gives us pleasure to add that almost all the suggestions we have offered are embodied in the Federation's circular and the rules and conditions of the Second Salon has our hearty approval as well as our best wishes for its ultimate success.

THE AMERICAN FEDERATION OF PHOTOGRAPHIC SOCIETIES

For the advancement of Pictorial Photography, encouragement of pictorial workers, and the development of new talent.

To hold an annual National Salon, of the highest class, to be exhibited in the important American art centers.

For interchange of club privileges and for mutual aid and support.

To establish a system of photographic record, aid in securing desirable legislation, furnish juries for exhibitions and competitions, act as representative of foreign photographic bodies when so requested, and to advance all photographic interests of national and international scope.

RUDOLF EICKEMEYER, Jr.,
Salon Director.

ART COMMITTEE.

Adolph Petzold, chairman; Oscar Maurer, Wm. H. Zerbe, Jr.; Geo. F. Power, R. L. Sleeth, Jr.; R. J. Hillier, Edgar Felloes, W. R. Cabot, H. E. Murdock, Chas. E. Fairman, Louis Lamb.

SALON COMMITTEE.

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FOREIGN RELATIONS COMMITTEE.

J. H. Thurston, chairman, 50 Bromfield Street, Boston, Mass.

As a guide to those who have not exhibited at previous Salons (to save them expense and delay, and also to avoid the impossible task of properly and carefully judging ten thousand entries in New York), it is requested that their entries be submitted to the local jury for their district, as per list below, who will forward all

approved work, in one carefully packed shipment, to the National Jury at New York City.

Work returned by the local jury may be sent to the National Jury by the exhibitor himself, if he so elects, and will receive full consideration.

American entries must be framed.

For Pennsylvania—to R. J. Hillier, 1811 North Broad St., Philadelphia, Pa.

For Washington, Delaware, Maryland and all South Atlantic States—to Charles E. Fairman, Capital Camera Club, Washington, D. C.

For Vermont, New Hampshire, Rhode Island and Massachusetts—to Wendell G. Corthell, Boston Camera Club, 50 Bromfield St., Boston, Mass.

For Ohio—to E. G. Fountain, Cleveland Camera Club, Cleveland, Ohio.

For Canada—to J. P. Hodgins, Toronto Camera Club, Forum Building, Toronto, Canada.

For Maine—to S. S. Skolfield, Portland Camera Club.

For Illinois, Indiana, Michigan, Wisconsin, Iowa, Kentucky and Southern States—to Robert E. Weeks, Chicago Camera Club, Chicago, Ill.

For Minnesota—to Louis Fleckenstein, Faribault, Minnesota.

For Kansas and Colorado—to Thomas A. Morgan, Denver Photographic Society.

For California—to Fayette J. Clute, care Camera Craft, San Francisco, Cal.

For Washington State and Oregon—to Will H. Walker, Tull & Gibbs, Portland, Ore.

For New York, New Jersey and all districts not mentioned above—to Metropolitan Camera Club, 102 West 101st St., New York City.

The work of those who have exhibited at previous important Salons need not be submitted to the district juries, but should be sent to the nearest Federation Camera Club and included with their shipment.

Any exhibitor may send direct to the National Jury, care Metropolitan Camera Club, 102 West 101st St., New York City.

FOREIGN ENTRIES

To be sent mounted or unmounted, but not framed.

All entries from Great Britain should be sent, to arrive by Sept. 20, 1905, to H. Snowden Ward, 6 Farrington Avenue, London, E. C., England, marked "For Second American Photographic Salon."

By including all British work in one shipment the exorbitant charges at this end will be minimized.

All entries from Italy, to Alfredo Ornano, 21 Via Caffaro, Genoa, Italy, to arrive in his hands by Sept. 20, 1905.

All entries from Norway, Sweden and Denmark, to Copenhagen (Denmark) Camera Club, before Sept. 20, 1905, marked "For the Second American Salon."

All entries from Australia may be sent to A. Hill Griffiths, 66 King Street, Sydney, N. S. W., and should arrive in his hands by August 20, 1905.

Entries from all other countries should be forwarded direct to Metropolitan Camera Club, 102 West 101st Street, New York City, U. S. A., marked "For the American Salon"—and BY MAIL, wherever possible.

Foreign Photographic Organizations are cordially invited to affiliate with the American Federation of Photographic Societies, for the interchange of club privileges; interchange of work, including slides; and to aid in the Encouragement of Photographic Art.

CONDITIONS.

1. Only work which gives distinct evidence of artistic feeling will be accepted.

2. There will be no invited work, and all prints forwarded will be examined by the Preliminary Jury, who will submit about 1000 frames to the Final Jury of Painters.

3. No work entered at the First American Salon, or which has been exhibited in this country prior to November 1st, 1904, will be eligible,—as it is desired that the Annual American Salon shall represent the work of the current year.

4. The work of the Preliminary Jury will be to select all pictures that give evidence of sentiment and individuality, regardless of style and school; these to be submitted to the Final Jury.

5. Each person intending to contribute is requested to notify the Secretary—Wm. T. Knox, 279 Washington Street, New York City—a month or more in advance of the closing date, but failure to do so will not prevent acceptance of work.

6. Entries must be suitably framed or glazed, and the title, name, and address of sender plainly written on the back of each—excepting in the case of foreign contributors.

7. Pictures from other countries to be forwarded without glass or frame, but should be suitably mounted. Accepted work from abroad will be carefully framed at the expense of the management. Foreign work should be sent by *mail* wherever possible.

8. Every contributor must pay the expense of forwarding to and from the Exhibition.

9. Pictures will be returned as soon as practicable after the close of the Exhibition, and in the same manner as sent to it, unless there be instructions to the contrary.

10. The Jury will not know the names of contributors until after the selections have been made.

11. All entries must be delivered at the rooms of The Metropolitan Camera Club of New York, 100-102 West 101st Street, New York City, U. S. A., *on or before Nov. 1st, 1905*, and packages should be marked "For the Photographic Salon."

12. A list of the titles must be sent separately by mail, giving name and address of sender, price of each if for sale, and special instructions if any.

13. All work will be insured against loss by fire.

14. A commission of fifteen per cent. will be charged upon each sale, but *not* upon the purchases for the Prize Funds.

15. A catalogue will be forwarded to each exhibitor.

16. Wherever foreign postal laws forbid photographs bearing the name and address of sender (if any do) the photographs should be numbered, and the titles (opposite corresponding number) mailed separately to Wm. T. Knox, Secretary, 279 Washington Street, New York City, U. S. A.

THE NATIONAL PRELIMINARY JURY,

who will select about one thousand frames to be acted upon by the Final Jury:

Rudolf Eickemeyer, Jr., Chairman; Walter Marshall Clute, Louis Albert Lamb, Adolph Petzold, Zaida Ben Yusuf, Helen P. Gatch, Pirie MacDonald, R. L. Sleeth, Jr., Fedora E. D. Brown, J. P. Hodgins, Thos. A. Morgan, Dr. W. J. Furness, Edgar Felloes, Oscar Maurer, Prof. A. G. Marshall, R. J. Hillier, W. and G. Parrish, Carl Rau, Geo. T. Power, Louis Fleckenstein, Wm. H. Zerbe, Jr., F. Dundas Todd, Wendell G. Corthell, Curtis Bell.

THE FINAL JURY.

Kenyon Cox, N. A.; Wm. M. Chase, N. A.; Frederick W. Kost, A. N. A.; Robert Henri, S. A. A.; Wm. A. Coffin, A. N. A.; Alphonse Jongsers; Will H. Low, N. A.; I. A. Joseph; John W. Alexander, N. A.; Irving R. Wiles, N. A.; Walter Clark, A. N. A.; Francis C. Jones, N. A.; Ben Foster, A. N. A.; Childe Hassam, A. N. A.; Dwight W. Tryon, N. A.; Geo. R. Barse, Jr., N. A.; Douglas Volk, N. A.; Henry Prellwitz, A. N. A.

As a recognition of the intrinsic value and artistic merit of photographic pictures the following Purchase Funds have been established—selections to be made by the Final Jury of Painters:

The American Federation of Photographic societies offers

ONE HUNDRED DOLLARS

for the best picture exhibited, without restriction as to subject.

The Country Calendar (13 Astor Place, New York), the new magazine of outdoor interests, has established a Purchase Fund of

FIFTY DOLLARS

for the best study of a rural, outdoor subject accepted by the Jury.

Landmark (Editorial Office: Hartford, Conn.), a new illustrated publication now in course of preparation, has placed in the hands of the American Federation of Photographic Societies

FIFTY DOLLARS

for the purchase at the second American Salon of the best landscape embodying some particular scenic landmark in any State or Territory of the United States.

A LOST SNAP-SHOT.

By W. E. ELLIOTT

In a deep, wild canyon of the Oregon Mountains is a deserted railroad camp. Only weather-beaten rafters and sagging ridgepoles are left of this rough settlement which a few summers ago was full of life. A hundred laborers drilled and shoveled and blasted the live-long day, and smoked strong pipes before their bunk tents at evening, and stormed the mess-house betimes. The big shed by the creek, its canvas roof torn to tatters by flying fragments from the blasting, rang to the hammer of the blacksmith. The little dug-out in the hillside was full of boxes and kegs of powder, and in the big commissary tent overalls and tobacco were sold at exorbitant prices.

Under a tree by the commissary was the engineer's tent. After the work had been surveyed and staked out the chief took away all the party except one, who was to remain as inspector. This individual was a college freshman who looked forward eagerly to a summer in that wild region. The works consisted of three large channels, each several hundred feet in length, strung along the railroad at intervals of about a quarter of a mile. One day in July the "spec," as he soon came to be known, stood on the edge of the First Channel. It was finished, and the creek, a raging torrent in winter, now trickled a tiny rill along the farther edge. As the surveyor admired the big water-way with its surroundings of cliff and canyon he thought, "What a splendid picture that would make!" and wouldn't the chief like a print of it? As if his head were already under the cloth the "spec" could see how it would all look on the ground-glass—the hundred-foot slope of jagged stone opposite with the sparkling stream at its foot, the bottom of the channel curving

smooth as a boulevard along the toe of the wall that sloped up to the track.

Next trip home the amateur gathered up his camera outfit. The machine was one of the old-fashioned gallery type. A huge nickel-plated lens tube projected from the front and was provided with a leather cap which was removed in making the exposure. The tripod was absurdly heavy and the operator needed a yard or two of black cloth over his head. Altogether it was clumsy enough, but with its big lens and long focal distance, it was superb for landscapes. The First Channel and several other interesting views had been taken when one morning the amateur sat on the track by the Second Channel talking with Joe Martin, foreman of the powder gang. The excavation was being done by two gangs of laborers working from the ends of the channel, and they were now separated by only about fifty feet of earth and solid rock. On top of this ridge three men sat about the hole which they had been four days in drilling.

"I expect to fire the through shot at noon," said the foreman, and even as he spoke there was a quick, smothered report from the drill hole, which was being "sprung" by small charges of dynamite to make the bottom large enough to hold the twenty kegs of black powder. It would be the last big "shot" of the season, and the amateur determined to make a picture of it.

He went at once to the hillside, about a hundred yards away, and chose a place to stand the camera. There was a large log convenient for shelter from flying stones. He was the more careful about this, for a young fellow on a similar job the summer before had been killed and his camera demolished by a falling stone.

Having selected a view-point, the amateur hastened to make his morning round of the work. As he passed the hill above camp he saw a cart at the powder-house being loaded with the little brown kegs. The notes were finished and the "spec" was back at his tent by the middle of the forenoon. The camera had no kind of automatic shutter, but after considerable planning and eager work he improvised one that did very well. This done, he cleaned and dusted the camera thoroughly, taking out the lens and wiping it thoroughly with an old linen handkerchief. While thus engaged, he was startled by the loud call of the time-keeper announcing twelve o'clock. As soon as all the men should get to a safe distance the fuses would be lighted, so there was no time to lose.

Hastily gathering up his outfit, the amateur sought the dankish gloom of the root cellar and there loaded the plate-holder. A moment later as he hurried along the track he met numbers of laborers walking rapidly towards camp. Joe Martin was out in the channel going from one fuse to another with a lighted taper, and calling loudly, "Fire! Fire!" The amateur dashed up the hillside, stood the machine close to the log and drew the cloth over his head. A few stragglers hurrying toward camp paused a second, and one of them called, "Hey there! Youse 'll get the glass smashed in that thing!" Then they scurried away, for now a score of "block holes" began going off like a fusilade of artillery, with occasionally a "coyote hole" which threw the boulders like canister.

Drawing the plate-holder from his pocket with one hand, the amateur turned the focussing screw rapidly with the other. A queer circle of light appeared on the ground glass. But no landscape with its living colors and sunlit foliage, and trees and hills upside down. Fragments of stone were now falling all about, striking the rails or clipping through the tree tops. Heedless of any danger the "spec" twirled the screw desperately. Backward and forward and back again, but always that hazy disc of light, now large, now small. It was

maddening, and withal, most, strange. The amateur popped his head out quickly and looked the machine over. Then glancing at the channel he saw a tiny wreath of smoke curling away from the ridge, and he knew the long fuse was nearly gone. Now trembling and furious, the amateur dropped the plate-holder, and with both hands worked the focussing frame back and forth, watching the glass.

Suddenly the air quivered violently, the ground rocked under his feet and a muffled, thundering roar filled the canyon. The amateur dodged under the log and looked quickly at the channel. The whole ridge, lifted bodily, hung in midair, surrounded by a cloud of smoke and dust, shot through by heavy, tumbling stones or sharp fragments that whizzed like bullets. A brief moment it seemed to hover, then the huge mass settled back with the groaning of thousands of tons of rock gringing together. The smoke floated lightly away on the breeze, a deep rumbling echo rolled like a tidal wave among the mountains, and the big blast was over.

While waiting a moment for any belated block hole to shoot, the "spec" nursed his wounded pride and fondly wished that a thousand pound boulder might settle on that miserable old camera. Soon the foreman, who had kept count of the shots, cried, "All over!" And the men came out from behind trees and under bridges and quietly surrounded the mess-house. The amateur snatched the camera and hastened into camp. He brushed suddenly past the stable boss who wanted to order a dozen copies of the picture. That simple soul knew every slip 'twixt the bottle and the lip, but the vastly more numerous uncertainties between the exposure and a picture how could he know? Bursting into the tent the "spec" threw the treacherous machine into an empty bunk and sat down, full of disgust and a dull sense of amazement. Pulling himself together a moment later to get ready for lunch, his eye fell upon the table. There lay the old linen handkerchief, and close by it the lens.

OUR PORTFOLIO

Prints for criticism; only one at a time and only once each month; to be sent to Dr. John Nicol, Point o' Woods, L. I. N. Y. The coupon found in our advertising pages must be attached to the back of each print.

tensely excited over the woodchuck's hole. is of good technique, but unfortunately the hole is in the centre of a clump of young trees which cut up rather unpleasantly one of the boys and the dog. As a record of fact, however, it is a very good photograph, and would have been better with a somewhat longer exposure and shorter development. The contrast between light and shade is a little too great, and the sky a little too white.

1981. L. D. ROWELLS—"In Early Spring" In this the photography is better than the selection, although the subject, a little differently arranged, includes matter for a fine picture. The objective point or object seems to us to be the path through wood, although we hardly see how we are to reach it. The foreground consists of a mass of boulders, probably the bed of a stream, and changing to a path beginning

No. 1979. A. H. WERHAN.
TARDY SAILORS.

1979. A. H. WERHAN—"Tardy Sailors," looks like an attempt to represent a moonlit scene on the water. A patch of light high up in the sky suggests the moon under a thin cloud, several banks of moonlit clouds down towards the horizon, and a stretch of silvery-sheen, extending from horizon to foreground. In the middle of the silvery-sheen, and, unfortunately, in the middle of the print, a yacht with one sail, and in the distance the masts of several other vessels, all just in such darkness as to suggest a moonlight effect and to suggest it very well indeed. If such suggestion was intended you have been more than fairly successful, and have made a more than fairly good picture, while if your aim was a daylight scene you have failed from insufficient exposure.

1980. PEARL L. GRAY—"After the Woodchuck," two boys and a dog, the latter in-

No. 1981. L. D. ROWELLS.
IN EARLY SPRING.

No. 1959.

A PLEASANT DRIVEWAY

J. Harmanus Fisher.

No. 1985.

NIAGARA.

C. L. O'Connor.

near the middle of the print and disappearing in the distance, and the puzzle is how to clamber over or through the boulders, to get to the path. The impression it conveys to us is that originally the path started from the foreground and led right through the wood, disappearing in the distance; but that through some convulsion or overflow of water a large part of it was washed away and the boulders left on its site. Looked at in that light it becomes a very interesting and really fine picture.

We feel like congratulating you on the true values, which means on having secured both correct exposure and development.

1982. MARTHA ROSENTERER—"Portrait."

We regret that we cannot compliment you on this as in every respect it might have been better. In the first place the model is too evidently standing to be photographed, and the hands, especially the left, too evidently bent in a way hardly natural or comfortable. Better, far better, let her pose and arrange herself. Then, the lower part of the figure is simply a black mass of which nothing can be made. It is evidently a "home" portrait with the light not properly arranged. There being no visible reason for such obscurity. So far as it goes, however, that is, the face and bust, with the aforesaid exceptions, it is very good, and doubtless a very good likeness; and if you will see that your models do not stare into the camera, take care that your light is properly illuminating the whole figure, and give sufficient exposure you will do good work. See "Answers."

1983. W. J. MCGUFFAGE—The unnamed print, a girl, with on the ground before her, a can filled with water lilies, is technically good while placing and pose might have been better. A grassy foreground reaching a little above the middle of the print topped by a darkish building against which the equally dark face of the figure is placed; a dark against a dark, with no apparent reason why the horizon should have been so high, so far out of its natural place, nor why the head should not have been against the sky. It was a good idea to show her in her bare-feet with her shoes beside her, as it conveys the fact that she had been wading in the water to get the flowers, but she should have been in action

No. 1983.

W. J. McGuffage.

rather than repose, not standing to be photographed, stiff as a lay figure. It is a very fine photograph of not the best or even a fairly good arrangement. A lower horizon, and the figure in action either with the flowers or her shoes would have been a decided improvement.

1984. F. SOLOMON—"Cyprus Swamp" may, in nature, have been an interesting subject, but as reproduced here is simply a meaningless conglomeration of what it would be hard to tell. A much longer exposure might have helped one to guess what it was intended to represent, but as no one object is of more importance than another, it is to us, merely a lot of black lines interspersed by a few white ones.

1985. W. E. MARSHALL:—"The First Lesson," a young man playing a violoncello, and evidently a "home portrait," is far from a success, there being three serious faults; Under exposure to an extent that leaves everything but one side of the face and a few minor points, perfectly black; focussing on the wall paper behind instead of on the figure; and the employment of a lense of much too short focus for the size of the figure; the bow-hand being very little less than the face and the bow itself considerably above its natural size. Under the same conditions expose twice as long at least, and limit yourself to a plate the longest way of which is not more than half the focal length of the lense.

1986. H. W. SCHONEWOLF:—"Surf," a print on greenish carbon, in which surf and spray and the rolling waves from which they come all in motion, rushing in and receding in a way that makes us almost imagine we hear the monotonous music yet music of which we never tire. The more we study it the better we like it; and there is just one thing that we can suggest as a slight improvement—a little more of the

sand. We should have selected a view point a few feet farther away so as to have increased the stability suggestion and given a little more of the receding water on the sand. It is one of the very best marine pictures that have come to The Portfolio.

1987. W. SMITH—"A Kansas Production," a Steer filling nearly the whole of the print, and nearly a faultless photograph from a technical point of view. Exposure and development have been just right, but "broadside on" is not generally the best position in which to take such a subject. As, however, there is nothing in this to which criticism can be applied but technique, and that is as nearly perfect as may be, we have nothing for it but praise.

1988. C. L. O'CONNOR—"Niagara," the American Fall, enlarged from 4 x 5 to 8 x 6, looking down the river and including part of the nearest bridge, is a fine picture, although the spray is, unfortunately, represented by white paper, a fault that might have been obviated in the enlarging. The majesty of the fall is better suggested in this than in most reproductions of the subject that we have seen, although that is to

a certain extent lessened by the crowd of visitors on the bridge-looking erection on the right. A single figure would have tended to a very different impression. If you have a doubt as to this just cover the whole of the figures, or leave only the closest to the fall on the left of the crowd, and you will *feel* the difference. It is a fine picture as it is, but if you can introduce into the large mass of pure white on the left an indication of the spray, you will see a great improvement.

1989. F. W. GRANT.—"Birth of a Battleship." The scene is the Seattle harbor and the point of interest the hull of a battleship just after being launched. Scattered all over the harbor are a number of steamers and row-boats, each of the former vomiting from their funnels black smoke in horizontal lines telling of a stiff breeze, and while there is nothing to criticise from an art point of view, the little picture is not only pretty but highly suggestive. It is an excellent photograph in which we cannot suggest an improvement.

1990. CARL KREBS. — "Stuck Fast," a horse and cart, the wheels of the latter partially sunk in the mud, while of excellent technique can hardly be said to be pictorial; and with some good qualities, has also, in view of the impression indicated by the title, several faults. The cloudy sky is admirable, as is also the all too rarely secured atmosphere, but the horse shows none of the strain incident to the pulling of the cart out of the rut, nor is the idea any better suggested by the man being seated in the cart. But, as already said, the technique is ad-

No. 1991.

M. S. White.

THE OLD APPLE TREE.

mirable, and the atmosphere all that could be desired.

1991. W. S. WHITE.—"The Old Apple Tree," an old apple tree, evidently in the backyard of a small cottage, and in full bloom, is an example of perfect technique, a very fine photograph of a subject hardly worth the use of an 8 x 10 plate, unless of some local interest or as a proof of what can be done in the record phase of photography by a good lens. We have often said that the record phase is of quite as much general importance as the pictorial; but at the same time cannot help advising one who has so thoroughly mastered technique to turn his attention to the art of

which it is or should be the basis. Just think of what a different impression might have been made by a photograph of a small branch with a dozen or so of the blossoms, arranged as a decorative panel and photographed in the same excellent way.

1992. H. W. THOMAS. — The unnamed print would be hard to name, there not being one object of more importance than another, so that we can only say that it is a fairly good "record," of a subject hardly worth recording. The principal objects are some half-dozen trees scattered all over the print that, from a far too short exposure, are merely black vertical lines, and beyond, in the place of a sky, merely white paper, made opaque in the negative by the prolonged development, incident to the too short exposure. Before you can make *pictures* there are two things yet to learn; first, to realize the necessity for sufficient exposure, and secondly, to learn to *see*, to recognize the material of which pictures can be made; and both require study, much more than you have apparently yet given them.

1993. GEO. M. BRIGGS. — "Old Runnels Dam," a stereogram of a fine subject; fine for the purpose, but little better than worthless from under exposure. The water is flowing over the dam right enough and rushing in a broken and turbulent state towards the spectator, equally right, but everything else; and the objects are many and important; is simply as black as paper can be made. It is a very decided puzzle to know why you do not see this as well as we; or seeing it, why you should send it for criticism. Of course, the subject is a difficult, very difficult one; but the credit of overcoming the difficulties is all the greater. The first essential is correct or at least sufficient exposure, which this has not nearly got, and the second is development in a solution weak, very weak in reducer until the detail is all out, and then in a stronger solution to produce sufficient density.

1994. JOHN ROESCHLAU. — "The Bridge" has two serious faults that put it almost out of court from both the technique and the pictorial. The "bridge" itself merely a line like a few planks horizontally across the print cutting it in two; and such under exposure

as has resulted in all below it except a little of the water below being simply black paper and a small portion in direct light including the sky, which, from over development which is equally white. Even the trees are black as night. Surely you can see as well as we that never except at the dead of night never were water under the bridge or trees above it so black, nor sky even in the brightest sunlight so white, and must know as well as we that to represent them as such is not the way to make a picture.

1995. W. UNDERWOOD. — "The Creek," including two small falls and bridge, all taken "straight on" and therefore more mechanical than artistic. The subject might have been made picturesque by a very different view-point, but bridges and falls are like houses in the fact that they should never be photographed "straight on" when the pictorial is the aim. Here we have a foreground of boulders large and small in the water, and behind them no less than seven straight horizontal lines apparently in one vertical plane; and above all a large patch of white paper intended to represent sky. The contrast between the boulders and the sky and the foliage is far too great resulting from a too long development in a solution too strong in reducer.

Try again from a different point of view and with a slightly longer exposure and weaker developer, and if you can stop development at the right stage you may have a really fine picture.

1996. A. R. CAHOON. — "At Allentown" is a pretty little print of the "record" order, as clear and clean as a steel engraving, but that would have been still better with longer exposure and shorter development. The slightly too short exposure of the negative has led to a development so prolonged as to make much, including the sky, railroad and water opaque and in the print white paper, that should have been in much lower tone. It is a fine subject that with truer values, would have been an attractive picture. By truer values we mean with everything in something more nearly in its natural tone or shade instead of as if covered with snow. As we have said over and over again in almost every page of the "Portfolio" good pictures or good records cannot be made without sufficient exposure.

First Award in Monthly (June) Competition.
1911.

W. G. Corbett.

Second Award in Monthly (June) Competition.

Wm. A. Hailer

MONTHLY PRIZE COMPETITION.

The quality of the work in two of the prints submitted in the monthly competition was so much alike, even to similarity in the printing mediums, that the award has again been divided. The winning pictures are reproduced elsewhere and in the following order of merit:—First, Wendell G. Corthell; second, Wm. A. Haller; third, H. W. Schonewolf.

The other pictures entered should really have been sent to the Portfolio, for criticism instead of being entered in competition.

Five Dollars is offered each month by the editors of the AMERICAN AMATEUR PHOTOGRAPHER for the best picture. This is done with the object of encouraging our readers to send some of their best work for reproduction and competition. The pictures are exempt from "Portfolio" criticism. The coupon to be found in our advertising pages must be attached to each print, the package marked "Competition" and sent prepaid to Dr. John Nicol, Point o' Woods, L. I., N. Y.

H. W. Schonewolf.
A SONG OF THE SEA.
Third Award in Monthly (June) Competition.

OUR TABLE.

Books for review and apparatus and material for examination and report to be sent to Dr. John Nicol, Point o' Woods, L. I., N. Y.

THE SENECA CAMERA MFG. CO. of Rochester, N. Y., has secured the sole right to manufacture the Rochester Adjustable plate holder. This holder is adapted to use smaller size plates by adjusting the springs and does away with the use of kits, which are cumbersome. The price, however, is practically the same as the regular holders.

* * *

PHOTOGRAPHIC PLATES FOR JAMAICA — Photographic plates imported into Jamaica come principally from England, and are packed in cardboard boxes containing three parcels of four plates each, wrapped in moisture-proof paper, and these again wrapped in thick slate-colored paper, thus insuring them against moisture and light. Photographers here who have imported

American plates have been very much disappointed by the unsuitable mode of packing, which renders it impossible to produce good pictures. Plates intended for Jamaica, or any other tropical country, should be wrapped in paraffin paper or in some other improved packing material which will exclude moisture. I feel sure that if this is done our trade in these and many other articles in which Europe now has a monopoly would rapidly increase.—*Consular Reports.*

* * *

THE SIMPLEX EXPOSURE METER. In our May issue we stated that the cost of the Simplex Exposure Meter is 25 cents; while, in the same issue, The Knowlton Company advertised their new Meter, recently completed, which sells for 50 cents. We would

like to explain that they have both meters for sale:—the 25 cent "Card" Meter and the 50 cent "Disk" Meter which they will be pleased to send on approval if desired.

* * *

AUTOMATIC or machine, instead of manual labor, is the trend of the times and G. Gennert knew what he was about when he introduced his "Auto Tank" and "Auto Developer." Instead of bending over a tray in a stuffy dark room in these hot days how much nicer it is for to drop the plates of a day's exposure in the auto tank, close the lid, open the darkroom door and spend fifteen minutes outside in some more congenial employment. It is a great time saver and economical too, as one developer will do for a whole batch of negatives. One can use any pet developer if it is diluted

"Auto Tank," a grooved fixing tank, washing box and a Hall's Portable Dark Room, no other dark room is needed and the most arduous tasks of photography become a pleasant pastime that can be carried on in the sitting room, on the verandah, or anywhere that is most convenient.

* * *

THE PRACTICAL PHOTOGRAPHER for May deals with "Gum-Bichromate Printing," and in its usual thorough way; there being articles including all necessary material and various methods of employing it to the best advantage by seven well known authors, including Demachy, Holcroft, Baker, Manly, &c.; and so well have they done their work that if ever the hackneyed expression "what this does not tell of gum-bichromate printing is not worth knowing" was applicable, it is applicable here.

Charles Moss is the pictorialist whose work and methods are given as instructive examples, and the eight illustrations show what can be done by enlarging from original 5 x 4 negatives. The prints from which the illustrations were made vary in size from 8 x 6 to 20 x 16, and are, some on platinum, some on antique, and some gum-bichromate, and all from negatives on bromide paper, enlarged from the original 5 x 4. Mr Moss does not take advantage of "the fatal facility" with which prints may be made but, according to the editor, is content to produce "some half dozen or so pictures each year for the Salon."

Gum-Bichromate is gradually growing in favor, and those intending to adopt it could not do better than send to the publishers of the Photo-Era for a copy of this excellent guide.

* * *

"ONE-MAN METHOD." — Milton Waide sends copies of his prospectus and of his series of what may be called his instruction sheets one to five, a careful reading of which shows that he has left no stone unturned in his method of tuition; and we have ample evidence both in the certificates of well known photographers printed in the prospectus, and in private letters from friends who have been his pupils of its success; as indeed a study of his instructions, his questions and answers and his

"AUTO TANK" IN USE.

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Accordingly, but it is claimed that the "Auto Developer" is so searching and thorough in its action that it will produce all the possible detail in the negative and that too, without the least trace of fog. Also it is not expensive, being supplied in four-ounce vials of concentrated solution at 40 cents each and in powder form at fifteen cents each. One ounce of this solution or one cartridge is sufficient for fifty ounces of developer, which can be used repeatedly until exhausted. Several claims are put forward for the superiority of tank development. There is less handling of the plates and danger of frilling or other injury; being developed in an upright position, particles of grit do not get imbedded in the film and a weak developer produces more soft and harmonious negatives and more even results from varied exposures. If one possesses an

formulæ shows it could not fail to be. So great has been the demand on his time that with all his desire to spread his method he has been obliged to raise the fee from \$10 to \$20, but, it is well worth it.

* * *

WITH THE CAMERA, the monthly circular from the Illinois College of Photography, tells of a visit to the Photo-Engraving department from Mr. Low Sanders, president of the National Society of Photo-Engravers. He examined the work in hand, gave a thoroughly practical address to the students, and intimated his intention of giving a highly favorable report of the school to the National Convention to be held in Buffalo next month.

It tells, as usual, of visits of many former students, of the success of many who had

opened studios, and, equally as usual, of the value of the College as a means of successful and suitable mating, three such weddings and rumor of a fourth being recorded this month.

* * *

COLORPRINTE.—We have received from Howe & Hall of Chicago a sample package of this paper that gives pictures in natural colors from ordinary negatives, and that is attracting considerable attention at present. We are too far from home to put it to the test of practical experiment, but from the colored print sent with the paper we can say that, while the colors may not be absolutely those of the subject photographed, the effect is very pleasing. We shall have a good deal to say about it in our next.

P. A. OF A. CONVENTION.

\$800 OFFERED IN PRIZES.

The convention of the Photographers' Association of America at Boston on August 8th to 11th will certainly be a record breaker for many reasons. The committee of arrangements have provided much that is good in the way of instruction and entertainment, and not the least attraction is the list of cash prizes that is being offered for good work and which has been augmented by a magnificent offer from the American Aristotype Company.

The following prizes are offered by the Association:

GRAND PORTRAIT CLASS,
consisting of six pictures, to be not less than thirteen inches one way.

First prize	\$300.00
Second prize	150.00
Third prize	75.00

GENERAL PORTRAIT CLASS,
consisting of six pictures, to be nine inches one way or less.

First prize	\$150.00
Second prize	75.00
Third prize	50.00

All pictures placed on exhibition will be passed on by a competent board of examiners, and such exhibits as shall be con-

sidered of a high degree of excellence will be awarded a certificate of merit.

Competitors must be members in good standing.

In addition to the above offer the AMERICAN ARISTOTYPE COMPANY will give to the winner of each prize a like amount, if the pictures winning the prizes are printed on Aristo Platino or Collodio-Carbon. Thus if these conditions are complied with, the winners of the prizes will receive as follows:

GRAND PORTRAIT CLASS.

First prize	\$600.00
Second prize	300.00
Third prize	150.00

GENERAL PORTRAIT CLASS.

First prize	\$300.00
Second prize	150.00
Third prize	100.00

The above offer is made with the view of encouraging competition, and as an incentive to workmen of ability to hang up photographs that will benefit the members in attendance at the convention from an educational standpoint.

For Rules and Regulations see Page 14, *Aristo Eagle*, No. 48.

ANSWERS TO CORRESPONDENTS.

Questions for answers, matters for publication, and all communications to the editors should be sent to Dr. John Nicol, Point o' Woods, L. I., N. Y.

A Question of Grammar.

J. R. T. AND W. L.—We do not care for deciding bets nor pretend to teach grammar; but as you seem to think the fact that the verb in question occurred in a photographic magazine an excuse for applying to us, we shall make this an exception. J. R. T. is right and, of course, W. L. is wrong, although there is some excuse in the fact that he may hear the same error very frequently, and that even by otherwise fairly well educated people.

Instead of "as far as it *lays* in the power of the photographic press" it should have been "as far as it *lies* in the power of the photographic press." Lay and its tenses convey the idea of action. The hen *lays* eggs, she *laid* one yesterday and may *lay* another to-morrow, while *lie* and its tenses suggest rest. I *lie* in bed till gun-fire, you will find the book *lying* on the table, it had *lain* there since yesterday. Don't trouble sending the cigars. I very much prefer my pipe.

Why not Construct a Card-Board Tube for the Lens?

S. BERRY FINN.—You hardly give us sufficient information to enable us to say why "it is thusly"; why, with a single anastigmat of 14 inches you fail to secure the much desired atmosphere. Presuming, however, that the lens is one of the elements of a doublet working at a large aperture, F6, the largest opening in the mount; you are working the single lens at only half that aperture admitting only a fourth of that light, and *consequently* increasing materially the depth of definition. As you cannot increase the opening in the mount you must seek the result by focussing.

We are sorry that you do not appreciate the picture to which you refer, as it has met almost universal approval. It is true that it lost much, very much, in the engraving, but even as reproduced it, to those who can bring the necessary

something to it, gives very, very much, pleasure.

Enlarging with a Box Camera.

MARTHA ROSENSTRETER.—Yes, you can both copy and enlarge with a cheap box camera as it is, if it is of the focussing variety although the copies will be very small. To get them larger you must shorten the focus of the lens by placing in front of it one of the "magnifiers" that are sold for the purpose, and the stronger the magnifier the larger you can make the copy.

For enlarging a different arrangement must be employed. One method is as follows: On a table well lighted, place the print to be enlarged, an ordinary hand magnifying glass, and the camera all in a line. Then move the hand glass too and from the print till the image is just the size you want, and then focus it in your camera. By moving camera and magnifier backwards and forwards you will get what you want, using both the magnifier close to the lens and the hand magnifier or reading glass.

The Lines of the Hand.

S. TOWNSEND.—We know of no book that "describes a successful method of photographing a man's hand so as to make a record of the lines and marks of the skin," but think it might be done in the ordinary way with a side lighting sufficient to put the lines in shadow. Failing that why not outline the lines in black, which would give a map-like copy?

Finger marks or prints are in almost universal use in prisons as a never-failing aid in the recognition of prisoners, and so reliable is the method that it has often secured conviction in the absence of other evidence. The usual method is to gently press the finger or thumb on a *thin* film of printer's ink spread on a slab or plate of glass, and then make a print on paper by a gentle pressure of the inked finger or thumb.

Pictures by Enlargement.

A. E. JOHNSON.—During the last decade most of the larger pictures at the exhibitions and salons have been enlargements but generally from $3\frac{1}{4} \times 4\frac{1}{4}$ or 4×5 negatives. We cannot say what would be the limit in smallness, as, as you suggest it depends on the film and lateral spreading of the lines rather than on the lens. The finest enlargement, up to 8×10 and lantern slides that we have ever seen were made by Professor Piazzi Smyth from negatives an inch square, made on one end of a 3×1 microscopic slide; but they were on wet collodion made from specially prepared pyroxilin, giving a structureless film. We believe, however, that there are on the market plates and probably films also sufficiently free from structure, or of fine enough grain to give negatives of your proposed size, $1\frac{5}{8} \times 2\frac{1}{2}$, using only $1\frac{3}{8} \times 1\frac{1}{4}$ thereof, or even less, that would bear enlarging up to four or five diameters. We may add that Professor Smyth's were focussed once for all by "trial and error," and having no means of seeing the subject included he went far enough away to make sure that he had all he wanted, and the enlargements and slides were frequently made from portions less than an ordinary shirt button; and yet on a twenty-five feet disc the markings on the shells of the desert sand were quite distinct. The lens employed by Professor Smyth was Dallmeyer's smallest portrait lens, then, we think, known as locket lenses, but one of the anastigmatic type would certainly be better, both as to flatness of field and defining power, and we should recommend one of three rather than your suggested two and a half inches.

With such a lens carefully focussed by trial and error, and aided by a magnifying glass, we believe that one square inch of the image would bear all the enlargement you want.

Permanence of the Print.

A. M. BLAKE.—We hesitate to become sponsor for the permanency of prints on gelatine paper toned by the "single toner platinum formula" quoted in your letter because experts are not agreed as to the actual conditions under which the color is produced, or to the part played by the pri-

mary silver image or the amount of silver that remains in the finished print. We have no hesitation, however, in saying *yes* to your concluding query "Do you think it would prove as permanent as the ordinary gold toning?"

A Question of "Meum et Tuum."

M. G. RHIND.—The 8×6 group of the workmen that is being sold for fifty cents per copy by your neighbor, although he is "only an amateur" is as much his property as the watch in his pocket seeing that it was made not to order and paid for by the men, but that it was taken on his own initiative, and sold copy by copy only on being shown to them. To copy it post-card size and sell it to the men, even at their request would be an act of theft quite as much as to help yourself to the aforesaid watch. It is true, as you suggest, that without registration he could not "get the law on you," but registration does not create the property, and without it the owner cannot punish you, but its absence does not make your crime any the less.

Negatives on Bromide Paper.

GEO. MCCLAIN.—As you may see from our notice of The Practical Photographer on another page, bromide paper not only may be, but by at least one very successful salon exhibitor is used for the making enlarged negatives, enlarged from 4×5 to from 8×6 to 20×16 . But while we have made some very satisfactory enlarged negatives on the bromide paper of various makers, we think that on the whole the "negative paper" of the Rotary Company is to be preferred.

J. W. TURNBULL.—You will see that "watchman" has reproduced the paragraph on another page; sodium thiosulphate is the correct name of hypo, a fact that we had supposed known to every photographer.

A. L. MILLER.—We cannot in this column recommend the articles of any particular maker, but have no hesitation in saying that the plates of all the four you mention are as nearly perfect as we can ever expect plates to be. We may add, however, that we use only *ortho* or *isochromatic* plates.

Alfred Stieglitz.

AT THE BEACH.

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THE AMERICAN AMATEUR PHOTOGRAPHER.

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MANIPULATION AS A MEANS OF INDIVIDUAL EXPRESSION.

It is the desire of many artists of the camera to give to their photographic prints a pictorial appearance or, in other words, to make them look like a picture or painting. The reasons for such departure from the straight road are various. With some it is simply vanity, with others it is a laudable ambition to assert their individuality, while there are some who, recognizing the limitations of the camera, adopt various means of expressing an inborn artistic taste, with more or less success.

The average amateur feels that his efforts are not duly recognized or appreciated. The people to whom he shows his latest prints may exclaim "How pretty!" "What a nice picture!" but there is never any allusion to art. The public has a preconceived opinion; the picture is made with a machine and therefore comparatively easy of execution. The artist painter makes his pictures with his own hands. Oh! that touch of the hand. It is that thought which rankles in the breast of

the amateur photographer, and he sets about to do something which shall be like the work of the artist. This is the cause of all manipulation. The camera becomes merely a helpmate; the photographer wants himself to be considered the principal factor in the making of the picture.

Advocates of straight photography cannot help at times admiring the ingenuity which is sometimes displayed in the attempts to attain these painter-like effects. In paintings these qualities are called *brushwork*, i. e., the painter's individual method of applying the pigment to the canvas. The work of almost every painter who has made his mark in the world can be recognized by his brushwork. Notice the reproductions of the two paintings by Ch. W. Hawthorne that accompany this article. The faces of the two men, the still life; what do they consist of but a chaos of brush strokes, of shimmering specks and daubs and flourishes, that are apparently accidental but really give form and vitality to

every detail? A scumble of color and there is a shirt front, two high lights and the result is a glass, and one spot of color on the lip of one of the two men and his whole face is aglow with animation.

It is like magic, and it is this which the artistic photographer strives for. The texture of the photographic print is too dull, too smooth and monotonous. He wants to animate it, make it vibrant and suggestive.

Let us see how he goes about it. There are only two methods of manipulation—elimination and augmentation. Most photographs are overburdened with details. Unless the photographer has a very fine feeling for line his picture is apt to be confused in form. There is no point of interest to which the eye is led. He is forced to subdue certain parts. Stieglitz's portrait of a baby shows such a case of extreme elimination. We say extreme because there is nothing

left but the point of interest—the child's head. It is in reality no longer a photograph but something that resembles a water-color sketch, while it is really an effect produced by the glycerine development of a platinum print. The values of the bust and background, particularly the dark spot behind the shoulder, are artistically handled, but the result could have been accomplished almost equally well by the ordinary method of vignetting.

Extreme elimination, as in this instance, has the one advantage of concentrating the entire interest on the subject itself. The white background gives the print a certain elegance of appearance, but only when it is cleverly handled and correct in values, otherwise it will look empty and commonplace.

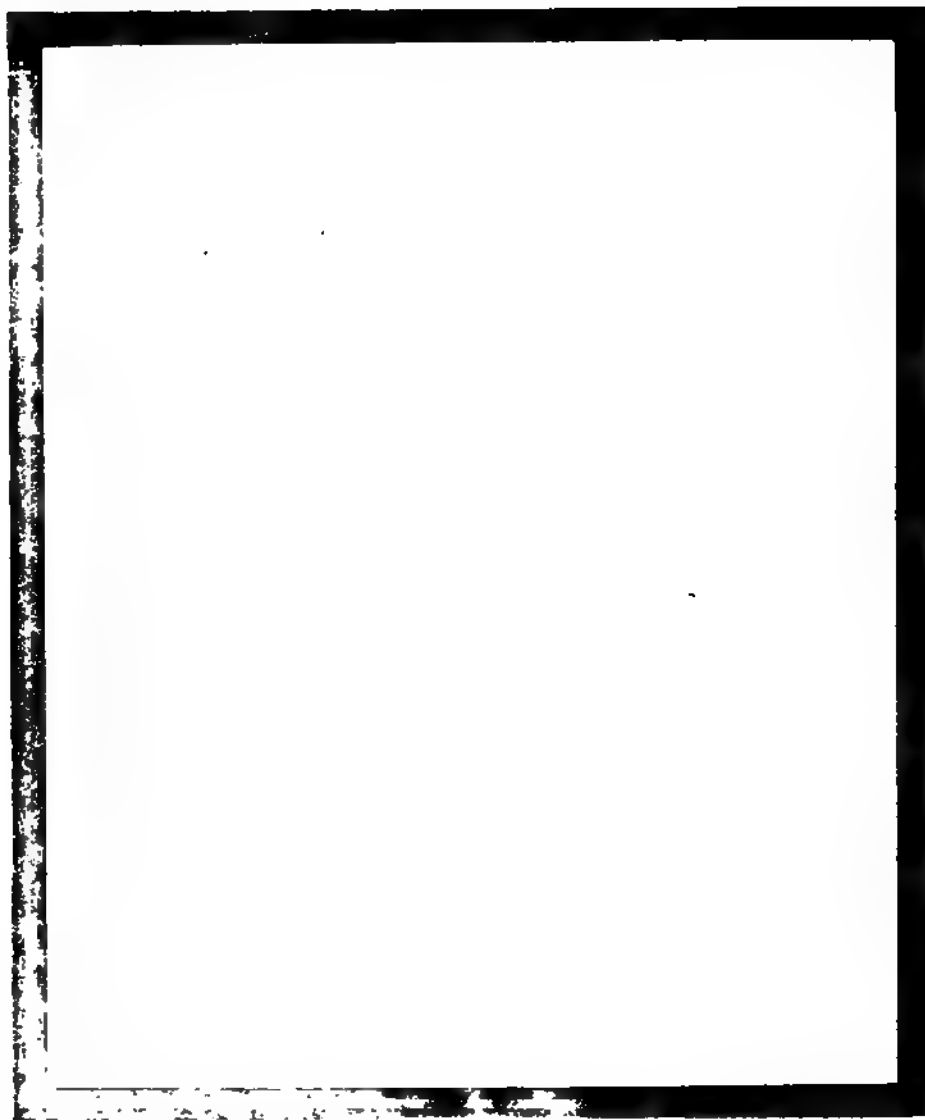
The photographer who has done more than anyone else to bring manipulation into vogue is Frank Eugene. He has a phenomenal ability to eliminate whatever is faulty in his negatives and to add such flourishes as in his mind add to the picturesque appearance of the finished print. It is astonishing what he makes out of a negative abundant with obtrusive details, meaningless dark and light spots and a false perspective. By the means of Chinese white which he daubs on the entire background with a brush or the tip of his finger and the peculiar manipulation of lines of etching, scraping and cross-hatching with some etching tool, he manages not only to hide the most glaring faults but to change at times the entire aspect of the background. Particularly characteristic of his style of working is his "Song of the Lily." Everybody would naturally think that it was

BOY WITH BOWL.

From a Painting by C. W. Hawthorne.

THE STORY.

From a Painting by C. W. Hawthorne.



PORTRAIT OF A BABY.

Alfred Stieglitz.

taken out-of-doors; it was taken, however, in his studio. The pool of water in which the form of the boy is dimly reflected is merely a mirror on which a few leaves and flowers have been placed. The background was originally formed by a gobelin and some branches and dried leaves. By printing it dark and painting in a tree in

storm. But why does he use the camera at all? Why does he not draw everything? you may ask. Well, you see, he merely uses the camera to produce a record, which suggests to him a picture. Like all manipulators he uses only certain parts of the photographic image and adds the rest. And if there is any legitimacy about it, his

THE COMING STORM.

R. J. Hillier.

the negative it looks in the print like a woodland background. This cleverness almost amounts to trickiness, but the result is charming. R. J. Hillier, of Philadelphia, however, goes one better. He does his retouching on the positive print with crayon sauce and then takes a new negative of the manipulated positive. He draws in whatever he likes. He is known to have changed a house into a tree and to have transformed a Fall landscape into a snow-

retouching of the positive is as legitimate as any other method.

But a photographer will never succeed in suggesting such breadth of treatment as we see in Hawthorne's picture; and even if it were possible, what would be the result? It would be like a reproduction of a painting or sketch, and not like an original photograph, and that is surely not the aim of photography. Be that as it may, the manipulation will go on, and

if any advice is acceptable we would recommend moderation.

The necessary gifts and qualifications to achieve anything like success are possessed by a chosen few. A.

charming picture. He is a clever manipulator, but he never destroys the texture of the photographic print. He merely suppresses detail and accentuates form. He does not add from his

No. 1.

WOODLAND.

A. Horsely Hinton.

Horsely Hinton is a notable example of how a man with high ideals, combined with good artistic taste and technical knowledge, can transform an insignificant snap-shot into a

own imagination but merely makes a better picture out of the image that was originally on the negative. We had occasion some time ago to refer to the painstaking and highly success-

ful methods by which he evolved his picture "Niagara," which graced the walls of the London Salon from a little 3 x 4 snap-shot of the Falls, and our great regret is that miscarriage of the

original idea and aspect. Notice how the trunks of the birches have been lightened and the background darkened. It seems a mistake, however, to have lightened certain parts of the

No. 2.

WOODLAND.

A. Horsely Hinton.

mails prevented our reproducing his picture at that time. In the two reproductions herewith of his "Woodlands" we can see the effect of his manipulation, how a picture can be improved upon without changing its

foreground. The foreground in No. 1 gives a much better impression of sun-diffused grasses than that of No. 2.

The pictorial photographer should know what he wants to take before he

uses his camera. He must make up the composition in his mind, for unless he has acquired the taste and knowledge to do so, it is only by the rarest chance that he will ever produce a successful picture. Manipulation of any kind should be charingly used by any except those who have had artistic training. Extreme manipulation is apt to produce freaks, clever to be sure, but nevertheless freaks. What we are

most in need of in photography is a healthy and normal application of those means that are strictly photographic. A manipulator like Hinton will always be regarded as a genuine photographer while the methods of Eugene and Hillier are merely isolated phases, successful in their way, but achieved by methods that are not to be recommended to the average photographer.

TESTING SHUTTER SPEEDS.

It is pretty generally understood that the speed-markings on shutters are not just what they should be, a matter of no great consequence so long as we know just what they are; but we may safely say that in spite of all that has been said about them and the many more or less simple methods that have been proposed for their measurement, not one photographer in a thousand knows what the speeds of his own particular shutter are, or how far they differ from what they indicate.

Some months ago we allowed a correspondent to tell our readers how he occupied his holiday by giving such desirable information to the host of amateurs at one of our Summer resorts, and at the same time filled his pocket with the much-needed dollars through the use of the Wynne's Shutter Speed Tester, and although we expected that others would follow the good example, we heard no more about it till a few days ago when Mr. Henry Wenzel, Jr., the American agent for the Wynne's Infallible Ex-

posure Meters, brought the matter to our mind. He had been applied to by two of the most prominent opticians and shutter makers as likely to know of someone who either did or was willing to do just such work, and in his turn he applied to us.

Surely here is an opening—many openings—one in each town, city, or locality for quite a number of men or women to get into a good paying business without outlay or capital beyond the cost of the Tester, and practically without previous training beyond the ability to expose and develop a plate.

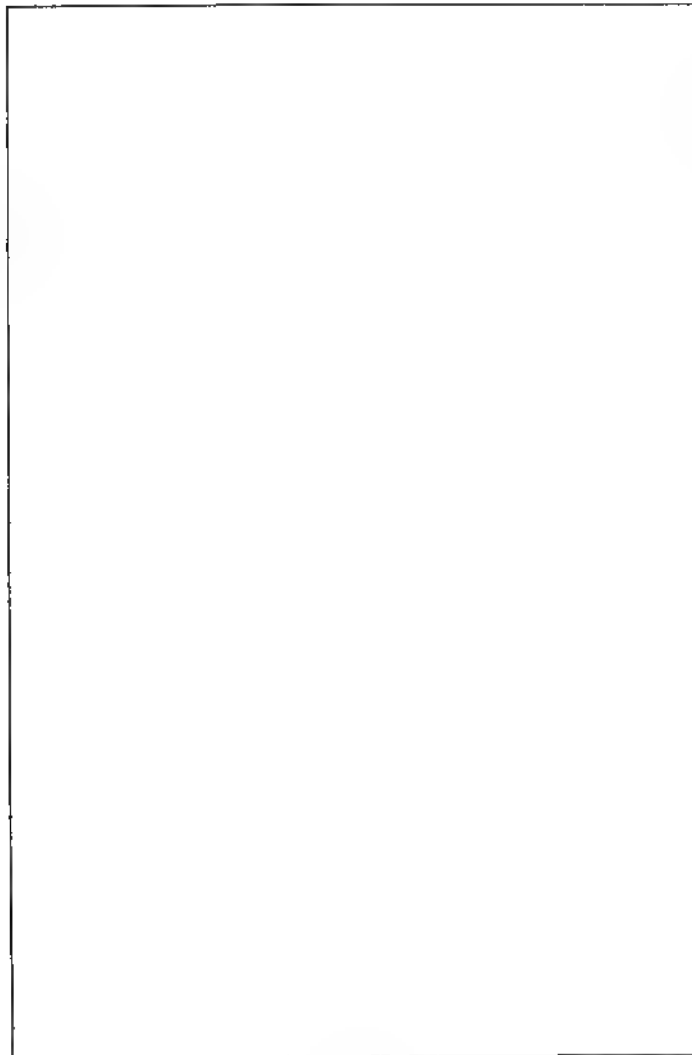
No matter how carefully shutters may be made, or how sound the principle on which they are constructed, springs *will* vary in tension, and surfaces working against each other will wear, and the more sensitive the plates or films the greater is the need for accuracy in exposure and for the knowledge of the speed of the shutters by which it is made.

This being true, who would not willingly give a dollar for a guaranteed chart of the various speeds of his

shutter; not once for all, perhaps, but once a year, to be sure that they did not change with time?

Some little advertising might be advisable or necessary, but so sure

are we of success to the man or woman who first takes possession of this vacant field that we can promise that our publishers will give reasonable credit for it.



INDIAN GIRL.

Joseph T. Kelley.

MAKING LANTERN SLIDES OF QUALITY IN QUANTITY.

BY ARTHUR PEEBLES SMITH.

This article illustrates and describes some devices utilized in producing lantern slides in quantity. For a number of years the author was connected with Dewitt C. Wheeler, of New York, in the production of slides in quantity.

Over 75,000 lantern plates passed through the writer's hands into finished slides of such quality that

taxing my reserve strength too greatly, the following apparatus was constructed, which is herewith delineated together with a few notes on slide-making.

APPARATUS.

Fig. 1.—Shows a plate-holding device to be used instead of the conventional plate-holder.

This holder is used for the making

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PLATE HOLDER FOR SLIDE-MAKING.

\$60,000 was realized by Mr. Wheeler in about four years.

Original chemical research, labor in special chemical formulæ, devising working system, etc., resulted in a nervous collapse. An average of 300 slides — all made by reduction in camera—being the required daily output.

After recovery, and wishing to continue slide-making for myself, without

of slides by reduction only. A frame is made similar to the regulation plate-holder and device attached to frame by pins or screws at edges TT.

The work-room is darkened, and light passing only through negative and lens admitted.

A wooden box, with one side removed, and 11 x 14 dry plate, fixed, washed, dried, and stained with naphthol yellow placed in front, and

First Award in Monthly Competition.

THE APPROACHING STORM.

R. E. Weeks.

A FLORIDA LANDSCAPE.

C. W. Taylor.

ROSES.

Second Award in Monthly Competition.

S. F. Clowrey.

POSTER DESIGN.

From a Gum Print.

By Robert Demachy.

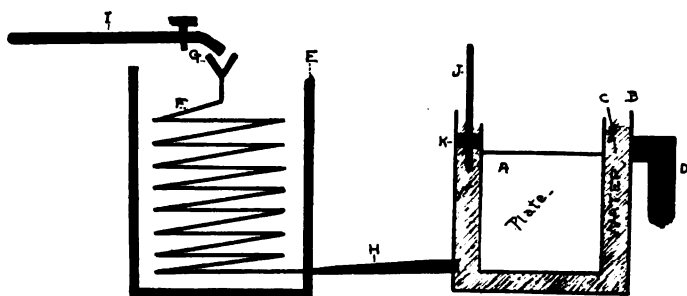


Fig. 2.

small lamp and ventilating chimney, added to box, will be found safe for handling the different lantern plates on the market if the box is placed a few feet distant and in line with back of reducing camera. Refer to Fig 1. A is a dry-plate in position for exposing. B spring which forces it into place. C D gauges for registering it either upright or in horizontal positions. In focusing, a ground glass is substituted in place of the lantern plate of same size.

Plates unexposed are arranged in piles, and as fast as exposed placed in separate piles until ready for development.

The device does away with the load and unloading of holders. Fifty plates can be exposed in forty-five minutes, changing negatives every two slides in camera. This is an average speed.

TEMPERATURE.

Uniformity of results as regards clearness, brilliancy, *snap* and *color*, cannot be obtained with regularity in quantity without constant temperature of solutions, room, etc. The addition of a small lump of ice in summer, or boiling water in winter to the water used in diluting the stock developer will assist in maintaining an approximate constant temperature, but the following piece of apparatus I have found quite useful in producing

slides in large quantities and maintaining temperature:

Fig. 2 shows an outline view of a cooling apparatus, developing tank, etc., enabling one operator to expose by reduction in the camera and develop easily 150 to 300 slides per day.

E is a wooden tank containing a mixture of ice and salt surrounding tubes F made of iron piping. The end of tube G I a stop-cock water connection with the water supply in building.

B is a similar wooden tank, with an inside grooved tank of hard rubber or glass containing developer and plates.

C is water surrounding hard rubber tank which is cooled by running through pipes of F. At J-K is thermometer to register temperature of water C. H is tube connecting both tanks. The overflow is a syphon at D.

A syphon is preferable, as its action tends to draw out any obstruction or dirt which is apt to collect around the developing tank. In developing, simply drop the plates into the grooved tank, and from time to time lift out and examine. About four minutes with the temperature of developer at about 50° F produces A1 results with practically no danger of over development with fairly correct exposure.

CHEMICALS.

The best chemicals are the cheapest.

Keep your bottles properly stoppered and labeled.

Distilled water is preferable to use, but in event not readily obtained, and hydrant or well water is utilized, boil and filter when cold.

Impure sodium sulphite should not be used. Most commercial sodium sulphites contain free alkali in form of sodium carbonate. Test a sample of sulphite by making a strong solution of same and gradually adding *dilute* sulphuric acid. If it effervesces strongly and requires considerable acid to neutralize—the sulphite should be discarded—as you will be dealing with an uncertainty. If you require sodium carbonate in your formula put it in yourself.

SLIDE NOTES—CONTACT METHOD.

The method utilized in making slides is a matter of choice. Reduction in the camera produces the sharpest result, and also enables the worker to use any portion of a negative composing the picture as may be desired.

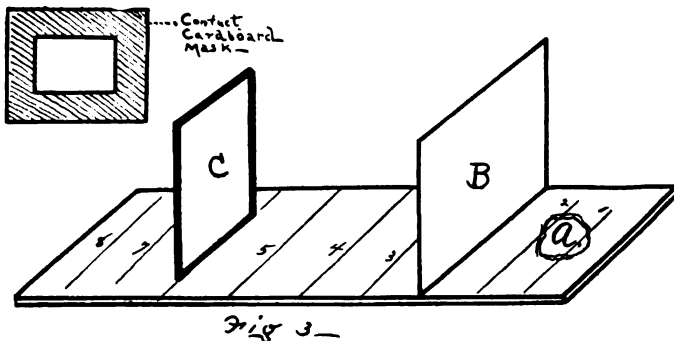
CONTACT METHOD.

Fig. 3 shows a convenient and inexpensive appliance for exposing slides by contact. At A is a fish-tail gas jet; B a diffusing screen of ground

glass; C an ordinary printing frame. 1, 2, 3, 4, 5, 6, 7, 8. are distances marked on the base, which is a board about three feet in length and ten inches in width.

Place negatives in frames (have as many as you can afford) and place opaque mask cut from card board a trifle thinner than lantern plate, with opening in centre (as in Fig. 3 mask) on negative, moving same until portion of negative shows through opening.

Now place a lantern plate film side down in the opening, first carefully dusting plate and negative with a piece of clean absorbent cotton, rubbing gently in one direction only to remove any dust particles. Do not use camel's hair or other brushes, as they electrify the film and attract dust, which produces pinholes and markings. Now place a piece of black paper over plate and put in back of printing frame, and fasten same and expose at about eighteen inches from diffusing screen. The time approximate exposure with most lantern plates is about two to three seconds with device described. With a little practice approximately correct exposure can be calculated at sight.



WORDS FROM THE WATCH-TOWER.

BY WATCHMAN.

The biter sometimes gets bitten as in the following case which I record as a warning to all who feel inclined to allow greed to get the better of their judgment. A photographer being supplied by a dealer with flash-light mixture instead of pure magnesium powder ignited it in a lamp, producing an explosion which slightly injured him, but so slightly that he was able to attend to business on the following day. He raised an action against the dealer suing for damage to the extent of \$1,000. The court awarded him \$25, and to show its opinion of the un-

reasonableness of the claim disallowed his expenses, leaving him considerably out of pocket.

* * *

H. A. Mummery, in an article on Turner in *Photography*, has the following which should be taken to heart by those extra realists who think the nearer they follow Nature the greater their art. "As to those who object to iron manacles floating on the water (in the 'Slavers'), I would say that faith is required in art as in everything else; one can be too particular over trifles."

NOTES.

PHOTOMICROGRAPHY WITH AN ORDINARY CAMERA AND ORDINARY MICROSCOPE. — According to *La Nature*, M. Thomas and M. Bellieni, two Paris students, have succeeded in obtaining perfectly clear images and great magnification with the cheapest form of microscope provided with rack and pinion and an ordinary hand camera:

"The manner of working is very simple. First, the microscope must be adjusted to the eye as usual; then, the camera lens, focused for an indefinite distance, must be placed against the eye-piece of the microscope. One must be careful, however, to have the axis of the camera lens coincide with the axis of the eye-piece, that is, so that the luminous point which represents the rays at their exit

from the eye-piece shall strike clearly in the centre of the lens. This may be determined by looking from the back through the camera. In order to avoid reflections, which might fog the plate, it is well to surround with a collar of black cardboard or other dark substance, the point at which the eye-piece and the lens meet. If the apparatus is placed near a window the object to be photographed is sufficiently illuminated to make unnecessary a long exposure. At night a small arc lamp may be employed.

"In this way MM. Thomas and Bellieni have obtained a large number of photographs without ever giving a longer exposure than three seconds. One of the most interesting photographs is that of a diatom, which has been enlarged 1,200 diameters. On the

shell are found striæ which run as high as thirteen to the hundredth of a millimeter, yet they are perfectly distinguishable in this photograph. This demonstrates the extreme clearness of the image. The fact that the focus is an infinite one is remarkable, but the results clearly justify the method. If it is attempted to reduce the open-

ing of the lens, it is found that merely the field is reduced. Another point is that the distance of the photographic lens from the eye-piece of the microscope is not a matter of indifference; the most favorable position is that in which the crossing of the light rays will occur in the centre of the diaphragm."

A FIXATIVE FOR CRAYON AND PASTEL WORK.

Probably the greatest drawback to finishing enlargements in pastel has been the extreme difficulty of fixing the work so that it does not smudge or easily rub off. The material has such a delicate hold to the paper surface that a mere flick with a duster is often sufficient to completely smear the picture with streaks of pastel powder.

Crayon artists who have never tried fixing pastels on photographic bases may probably doubt the existence of the difficulty, as there are on the market various "fixatifs" for fixing crayon work. They are, unfortunately, totally unsuitable for photographic work, as they dry over a gelatine film with a more or less patchy and glossy surface, totally ruining the work.

Again, a fixative which will do tolerably well for a rough paper is useless for a smooth one. I have tried diluting the "fixatifs" on the market so as to make them dry flatter, but the result is unsatisfactory. After making extensive experiments with various gums, gelatines, etc., and many diluents, I have settled on a formula which gives very good results on both rough and smooth papers, and can be

safely used without fear of spoiling either the enlargement or its mount, the latter being quite as essential as the former; for it is impossible to cover it so that the fixative will not travel on to it. When perfectly dry, it will stand dusting and practically as much rough usage as a water-colored enlargement would do.

THE PERFECT FIXATIVE.

In order that the reader may understand the difficulties in the way of making a perfect fixative, it may be as well to point out the necessity that the preparation used should not discolor the enlargement or its mount; should not dry glossy, white or patchy; should not form tears or spots; should dry quickly, and not carry off the powdered pastel—or, in other words, remove the work. In connection with this latter point (which will remind the retoucher of the trick some negative varnishes have of removing retouching), I found that by far the greater proportion of compounds used removed part of the work, and so were useless.

FIXATIVE CONSTITUENTS.

Of the most suitable bases for making a fixative may be mentioned mastic

and celluloid. The former is more useful than other resins or gums on account of its greater hardness combined with elasticity. Mastic is partly soluble in alcohol, methylated spirit or ether, but a tenth part of it (which gives it its elasticity) called masticine, is insoluble therein. I find that amyl acetate dissolves the mastic acid, and also has some effect on the masticine, for a clear and bright solution can be effected with but little precipitation. The two, therefore, used together make a fairly passable fixative, but disposed to deposit in fine string lines and rings, whilst if ether, alcohol, or methylated spirit is used instead of amyl acetate, whitish crape-like markings are apt to make their appearance, as also they do if a fixative composed of celluloid, alcohol and ether is used, unless it is made so strong in celluloid as to cause it to dry glossy. Celluloid and amyl acetate would do admirably but for its disposition to remove portions of the pastel-work; but by combining them with mastic we get a satisfactory result.

THE FORMULA.

No. 1.

Mastic	-	-	-	24 gr.
Amyl acetate	-	-	-	3 oz.

Dissolve by agitation, and allow to stand some hours before use.

No. 2.

Celluloid (film clippings free from emulsion will do)	-	-	-	7 gr.
Amyl acetate	-	-	-	3 oz.

Dissolve by agitation, and when No. 1 solution is clear, mix both together, and keep for use in a short-necked and tightly-corked bottle.

HOW TO APPLY THE FIXATIVE.

Procure from the artists' colorman

a spray diffuser, which is composed of two little pipes, which when opened out for use are at right angles to each other. Place the picture to be fixed in a vertical position, and then insert the end of one of the pipes (the finest one, and made of metal) in the bottle of fixative. Put the other, and larger, tube to the mouth (which must be emptied of saliva and the lips dried), blow through it in the direction of the enlargement, which should be about fifteen inches away. The fluid will be brought up through the smaller pipe and sprayed on to it. Direct the spray to the upper edges of the photograph, and then work across and down as rapidly as possible, and using only a very small quantity of fluid, otherwise it will run in unsightly tears down the mount. But in applying it is best to cover the entire enlargement, and not only the part worked up, as in course of time the part not covered may yellow more readily than that which is fixed.

When covered, dry the enlargement by waving in the air, and also rotate it so that the fixative does not dry in curves. If it does it will leave unsightly glossy lines, and although these may be removed by dabbing (without rubbing), using cotton wool moistened with amyl acetate for the purpose, yet it is far better to avoid having to do so. When surface dry, it should be allowed to stand by for an hour or so to harden, and then it can be subjected to any careful handling without risk of damage, and if properly done it will be found that the fixative has dried in a way so that it is impossible to tell without rubbing whether the picture has been fixed or not.—*British Journal of Photography.*

THE CAPACITY OF DIFFERENT PRINTING PROCESSES FOR RENDERING GRADATION.

BY WILLIAM GOODWIN,

Hon. Secretary of the Glasgow and West of Scotland Amateur Photographic Association.

(Continued from our last issue.)

The direct printing pigment processes,

GUM-BICHROMATE

and its congeners, do not properly come within the scope of my paper, because I assume that they are seldom, if ever, used by their devotees without some artificial interference with the gradation. I would only remark that the depth of shadow will depend largely on the amount of pigment used in preparing the coating, and the purity of the lights on the kind of paper used, smooth paper giving clearer high lights than rough.

The remaining daylight process in general use is

PLATINUM PRINTING.

I have tested the three brands of platinum paper most used in this country. All these are development papers for use with cold solutions. They have a good range of gradation, but one in particular has the longest range of any daylight printing process, and this particular paper should be specially useful when a negative of unusual "pluck" is to be dealt with. With average negatives there is little to choose between the three, although the prints will differ slightly in contrast according to the paper used.

It is usual to say that "you want a plucky negative for platinum printing." The reason lies in the uniform

character of the gradation. From the faintest stain up to the fullest black the steps go up a steady increase. There is no falling away in the lights, no softening down in the shadows, as there is neither discolored film to act as a screen during exposure, nor degradation in fixing. Hence every tone in the negative is rendered in its true value, and as the deepest shadow is a deep pure black, a very long range of tones is available which a flat or thin negative cannot fully employ. Hot development, although it decreases the exposure necessary, does not increase the number of gradations rendered. It warms the color, and I think slightly adds to the "pluck" of the print.

It is a peculiarity of platinum papers that when the maximum depth they are capable of rendering has been reached, a sort of reversal sets in, so that the shadows actually grow lighter with prolonged printing; this, of course, can only happen when the negative has too much contrast for printing by this process. That, however, is almost the same thing as saying it is too dense for anything. The gradations rendered vary from about the same as P.O.P., 1 to 128, to 1 to 400, which is several tints more than any P.O.P.

In dealing with these daylight processes my aim has been to find their

extreme limits. Probably in actual practice these limits are seldom used to their full extent, but I hope I have made it clear that even with negatives which do not call for the full range of tones the paper is capable of giving, there is considerable choice in the character of the print. There is, of course, no control, except in the case of carbon, and the only way to change the character of the print is to use a different make of paper.

Coming now to processes used with artificial light, such as

BROMIDE PAPER,

we meet with new conditions, as the gradations of these papers vary according to the treatment they receive as regards exposure and development. My first experiments were made with a view to finding the range of tints obtainable when development is pushed to its full extent. The range of gradation attributed to bromide papers by even recent writers is as low as 1 to 16, and it was a surprise to me when my first experiment yielded gradation far exceeding that. Fearing that after all my screens were at fault, I tried a new tack, and made graduated exposures direct to the light by means of a dark slide. Leaving a strip unexposed, exposures of 1, 2, 4, 16, 32, 48, and 64 seconds were given to successive strips of the same sheet. All these various gradations were clearly rendered as far as 48 seconds, and even the difference between 48 and 64 was distinguishable, although possibly not to a useful extent. As it is evident from the strength of the 1 second strip that $\frac{1}{2}$ second would have given a useful tint, the paper is capable of printing from a negative having gradation 1 to at least 96

without loss of detail in either lights or shadows, and with care it would go as far as 1 to 128. This is one of the latest papers placed on the market, and no doubt embodies the latest improvements in manufacture, but there are others which show quite as great a range. On the other hand there are papers giving a much shorter scale, and these are suitable for thinner negatives.

It must be noted that I am dealing only with contact printing. When these papers are used for enlarging, the optical conditions are such that the negative is practically intensified, its half-tones and high lights becoming much more opaque in comparison with the shadows than when it is used in contact with the paper, and the greater the enlargement the greater the intensification. It seems to me that ignorance or neglect of this peculiarity is largely to blame for the gloomy aspect of our exhibitions these last few years since enlarging became the fashion. It is hopeless to expect that a negative of the proper contrast for P.O.P. will yield a *good* enlargement on bromide paper, for in the attempt to get detail in the lights the shadows will be overdone, and the result will be one of these productions seemingly taken "twixt the gloaming and the mirk," which are only too familiar.

Time has not permitted me to experiment with the enlarging value of negatives, but I do not think the gradation should exceed 1 to about 16 (contact value). Such a negative would not be useful for printing-out, but it could be used in contact with gaslight papers, also some bromide papers with proper treatment in exposure and development.

Returning to contact printing, I may

first compare bromide papers in a general way with P.O.P. and the other processes already dealt with. We are accustomed to call bromide prints black and white, but when compared with P.O.P. the black appears but a grey, and as a matter of fact the scale of gradation is not so steep as one would expect. The matt surface which most of these papers possess no doubt produces greyness to some extent, partly by permitting scattering of light, but also by virtue of the starch which I understand is introduced into the emulsion for the purpose of creating a dull surface, and which no doubt dilutes the black of the silver. Further than this, however, it can be seen from the example of glossy bromide that the silver itself is rather grey as compared with P.O.P. or black carbon.

In testing these papers I have used as a normal developer two grains of amidol in each ounce of 5 per cent. sodium sulphite, with two drops of 10 per cent. pot. bromide to ensure absence of fog. This developer is sufficiently concentrated to give the deepest black the paper is capable of producing, and the amount of bromide is too small to affect the gradation.

Under these conditions when development is carried to the point at which all further action ceases, the majority of the papers I have tried give seventeen tints, equaling a range of gradation in the negative of 1 to 128; one gives a very short range, fourteen tints, equaling 1 to 48 (that is one of the older brands); another gives fifteen tints, equaling 1 to 64; and another sixteen tints, equaling 1 to 96.

Thus it appears that most of them are quite capable of dealing with nega-

tives of normal contrast, such as are suited for P.O.P. It has to be noted, however, that bromide paper is subject to rapid falling off in contrast towards the ends of the scale even to a greater extent than P.O.P., and it is doubtful if some of the tints at the ends would be distinguishable from each other if scattered about as in a print.

The falling off in contrast is due to a different course from those described in speaking of P.O.P. It must be remembered that bromide paper, like bromide plates, has periods of under, correct and over-exposure. In the high lights the conditions are those of under-exposure producing rapid falling off in contrast; in the middle tones, which form the really useful part of the scale, there is the period of correct exposure, characterized by regular increases of opacity; in the shadows the period of over-exposure appears with its characteristic falling off in contrast so that the last few tones are hardly distinguishable. Modification of the developer, leading to incomplete development, alters the scale considerably. A weakened, that is to say a diluted, developer lengthens the scale, provided, of course, development is not continued too long, for ultimately even a dilute developer would give the same reduction as a strong one. By dilute I mean double to three times the quantity of water, and under these circumstances I find the scale lengthened to eighteen tints, equaling a negative of 1 to 160. Great dilution—ten to twelve times the water—leads to a condition which Winthrop Somerville describes as incomplete reduction of the silver. Possibly the image then consists partly of Carey Lea's photo-bromide. However that may be, the range of gradation is very

great. The color, however, is bad—a sort of whity-brown. By reducing it to haloid and re-developing with a strong developer, the color is improved to grey, but the scale remains very flat.

FACTORS THAT INFLUENCE GRADATION.

The very remarkable influence of chromic acid or a bichromate on gradation calls for notice. In this country it was first described by Mr. John Sterry, but I believe the discovery is claimed by the German Professor Namias. Exposure is given sufficient for the highest light, and by treatment with very dilute chromic acid or bichromate solution previous to development the over-exposure of the shadows is corrected. I show you examples of long exposures behind my screen, one developed normally, the other treated with 1-1000 chromic acid for two minutes. The first, of course, shows the normal number of tints for the paper, followed by long tracts of uniform black; the second shows gradation throughout, indicating that it could print from a negative of gradation reaching to thousands—far beyond the possible gradation of any ordinary plate. In preparing these examples I have continued the action of the chromic acid too long, thus losing one or two tints in the lights, but with proper adjustment that would not happen.

Excess of bromide in the developer shortens the scale considerably, but as in the case of plates it must be present from the beginning. Even with amidol, two grains per ounce of bromide shortens the scale two or three tints, thus enabling a thinner negative to be used. With a harder working developer, such as hydro-

kinone, of course the shortening would be greater still, but it must be remembered that there is a limit to the permissible quantity of bromide, as the color of the image becomes disagreeable when over-restrained. The composition of some developers used for bromide papers rather puzzles me. The idea seems to be to add alkali to make it strong, and then bromide to make it weak. A developer such as amidol, which will work cleanly with little or no bromide, seems more rational, and avoids any shortening of the scale.

The time of exposure influences the character of the gradation. Long exposure flattens the print by fully exposing the lights and giving full detail, while it over-exposes the shadows, causing them to decrease in contrast. Short exposure allows full contrast in the shadows, but loses detail in the lights. The distance of the light or strength of the light has also an influence. Powerful illumination reduces the effect of under-exposure in the high lights and increases the over-exposure in the shadows, while weak illumination has the opposite effect.

Lastly comes the gaslight papers which have become so popular in recent years. As originally introduced these papers had an extremely short and steep range of gradation requiring thin negatives and necessitating great care in exposure to avoid exaggerated contrast. Such papers are still in the market and have their uses, but other varieties with a longer scale have been introduced, suitable for negatives of moderate gradation. Amongst the recent introductions I find one which equals in this respect some of the older bromide papers. The difference in character of the vari-

ous makes of these papers is enormous, and the photographer who does much printing on this medium would do well to have several different brands at his disposal to suit different styles of negative.

Amongst the brands I have tested there are papers giving gradations 1 to 8, 1 to 16, 1 to 25, and one of recent introduction, 1 to 64, which equals a slow bromide. These are the gradations of negatives most suitable for the brands of paper, but that is not to say that negatives of longer scale cannot be printed on them. They can be dealt with by giving full exposure and using a somewhat diluted developer, but as it is necessary to use the whole scale of tones in order to bring out detail in the lights, the print will be too harsh in contrast. Longer exposure which would bring out the detail at an earlier stage would tend to block up the shadows, while greater dilution of the developer, although it would give a softer result, would injure the color. On the other hand a negative within the proper capacity of the paper will give a soft or a brilliant print at will according to the duration of development and the amount of exposure while retaining the pure greys and blacks which are characteristic of the process. Bromide cannot be added to the developer to slow development, as it spoils the color, nor can dilution be resorted to unless a warmer tone is desired. Prolonged exposure followed by very dilute and restrained development gives warm colors owing to incomplete reduction of the silver, probably with formation of photo-chloride.

Development with excess of bromide and carbonate of ammonia to obtain red tones shortens the scale, but the

color contrast is small, tending to give a flat print.

A few words as to the means of suiting negatives to processes must conclude my paper. We have been told by Messrs. Hurter and Driffield that to obtain equal degrees of contrast all plates must be developed for an equal time at an equal temperature, but the temperature is just the difficulty, as few of us have facilities for regulating this factor. Mr. Watkins, by his factorial system of development, overcomes the temperature difficulty, provided exposure is reasonably correct, but in the case of varying exposures factorial and time development give different results. That, of course, need not matter to users of the factorial method, as its author supplies the means of ensuring correct exposure.

I do not think, however, that these methods of development by rule will ever appeal to the great majority of those who use photography as a pastime. There is an interest and fascination about "working up" a negative during development which will always appeal to most of them whether they really control the result or not—they will continue to believe that they do.

Personally I have long ceased to believe in the efficacy of "tentative development," believing that the character of the negative is governed by the exposure given to the plate and the time allowed for development. I do not overlook the effect of restrainers or of dilution, but I contend that the necessity for either must be known before the developer is applied to the plate.

The learner in photography would do well to spend less time in the dark room practising the art of "tinkering

the developer," and more time at the fireside studying the factors that govern exposure. Having acquired the art of exposing correctly, he may "tinker" as he likes, and he will probably get a good negative just as he would have done had he developed straight away.

The great point is to so expose that the contrast required by the printing process in view will be secured without having an unduly dense or thin negative.

Uniformity of working conditions will greatly aid in attaining the art of stopping development at the proper stage. There seems to be little need for using different kinds of plate nowadays, as plates of great rapidity have now as much "latitude" as anyone need desire. As a matter of fact, amongst the plates I tested for range of gradation, that one which gave the greatest range and therefore the greatest latitude in exposure was also one of the most rapid in the market. Therefore it is better to find a plate that pleases you and use no other. Knowing its characteristics, you will then know when it is "dense" enough. There is no need to try every developer you hear of. That sort of work you may do as an experiment, but when you want *negatives*, use one formula which you have found to suit your plate.

Then as to temperature, although it is admittedly difficult to regulate this factor, extremes can usually be, and should be, avoided, as the influence on results is great.

The dark-room lamp is another factor which should be regular, as with a varying amount of light judgment of density is apt to be faulty.

Another very important factor is

pyro-stain or developer stain of any kind. I do not refer to general stain, affecting the shadows — no careful worker will have that to contend with; but I refer to the graduated organic image deposited along with the silver, and in something like the same ratio. This must have a very disturbing influence on the printing value of the negative, as may be seen in the example I show you. It is a plate exposed in graduated strips and developed in pyro-soda without sulphite. The silver having been dissolved out, you will see that I have obtained quite a respectable print from the pyro image. The extent to which this stain exists depends entirely on the amount of sulphite present in the developer, and as the sulphite in a stock solution is constantly decreasing by oxidation, the amount of stain will increase with the age of the solution. I am quite aware that many workers consider this stain desirable, but it is hardly under control, and I think that when uniform negatives are aimed at it would be better to depend on silver alone for density, and to use a freshly prepared developer, or one of non-staining character.

THE END.

Death of Mr. John Carbutt.

The sad news reaches us just as we go to press that Mr. John Carbutt died at his home in Philadelphia on July 28th. In the shadow of recent bereavement we all the more tenderly convey our condolences to his sorrowing family. A pioneer in his line and a constant worker for the advancement of photography as a science, his death is a universal loss. Next month we hope to refer at greater length to his labors in behalf of photography.

HOME-MADE ALBUMEN PAPER.

Of all printing-out papers, albumen has proved itself to be the most permanent, and as the appearance of an albumen print is rich and pleasing it is a matter of surprise why this process has almost fallen into disuse. One reason, no doubt, is that the albumenized papers on the market yield a glossy surface, and matt surfaces are now in vogue. Now some of the early albumen papers yielded prints with a rich black tone and a matt surface, and as there are some who may like to prepare their own paper, we extract the working directions from the *British Journal of Photography*.

The preparation of the matt paper is exceedingly simple, the amount of water with which the albumen is diluted regulating the amount of gloss. It is not so easy to prepare the paper with a high gloss as the albumen must then be used undiluted, and is more difficult to apply to the surface. Any good writing paper may be used for experiment, but for the best results and permanence of the image it is absolutely necessary to procure Rives or Steinbach papers.

Here is the formula for the albumenizing solution:

Albumen (with the germ carefully removed)	..	10 oz.
Water	10 oz.
Chloride of ammonium	..	200 gr.

This, it will be seen, gives us ten grains of the chloride to the ounce. It will be noticed that this is a much larger proportion to chloride than is employed for modern papers. The mixture is whipped with an egg whisk

into a perfect froth, and the membranous shreds allowed to subside, which they will do in ten or a dozen hours.

The albumen having been allowed the necessary time to separate from the froth and the flocculent matter to subside, it is strained through fine muslin into a dish. It is then skimmed with a strip of blotting paper if any air bubbles are on the surface. A sheet of the paper is then taken by opposite corners, slightly bent to a curve, and one corner gently laid on the surface of the albumen. The whole sheet is then gently lowered, so as to avoid the formation of air bubbles. It is allowed to rest for a minute or so, then one end is raised and the paper slowly, as it were, *dragged* off, and hung up to dry. When the paper is removed in the way described little or nothing is left on the surface that will drain down and thus produce an uneven coating. The quicker the drying is effected the higher will be the gloss. With slow drying the albumen will sink somewhat deeply into the substance of the paper, which will then have a more matt surface. With the proportion of albumen and water here given the paper will have a semi-glossy surface, but with a larger proportion of water it follows that it will possess a more matt one, and one that is more in accord with those who desire vigorous prints with a more or less matt surface.

The sensitizing solution best suited to this paper, and the one which was formerly employed for it, is simply a

plain solution of nitrate of silver, 60 grains to the ounce of distilled water. The paper is floated on the solution in the same way as given for the albumen, and allowed to remain for three minutes; it is then fastened by a black pin at a corner to a line, and allowed to dry. After the paper has hung for a short time to drain, the drying may be completed before a fire. This paper, after sensitizing, will keep for a couple of days in cool weather, but it is always advisable to use it as soon as possible, as then the whites are purer, and the picture generally is more brilliant than when it has been kept for a day or two. Any of the toning baths may be used for this paper, but the one used at the time it was in vogue was a combined toning

and fixing one: Here is a formula for one that was very generally employed:

Water	12 oz.
Hyposulphite of soda ..	8 oz.
Chloride of gold (dissolved in 2 oz. water)	8 gr.
Nitrate of silver (dissolved in 2 oz. water)	30 gr.

This makes about a pint of solution. The bath is ready for use after it has stood for ten or twelve hours for the precipitated sulphur to subside. The toning proceeds slowly, and as the bath becomes exhausted of its gold it may take an hour or two; hence there is no fear that the print will be toned before it is thoroughly fixed, as with modern papers and combined baths. Prints produced in the early days of the art by the method here described have proved to be exceedingly stable.

THE SPEED OF TELEPHOTO LENSES WHEN EMPLOYED ON NEAR OBJECTS.

BY CHAS. LOUIS HETT.

Telephotographic optics have generally been treated in a manner which does not commend itself to those who have not gone very deeply into the matter. I propose to deal with my subject by adhering as closely as possible to first principles, and by making no use of formulæ. In carrying out this plan, and with the view of avoiding undue prolixity, I am obliged to assume that my readers are acquainted with the rudiments of the subject.

Telephotographic combinations differ from other lenses in the greater separation between the elements, and also in the method of focusing. In ordinary lens combinations, the Cooke

focusing lens excepted, focusing is accomplished by adjusting the distance between the ground glass and the lens. In the telephoto the interval between the two elements is altered. This adjustment alters the equivalent focus. From this it is apparent that the equivalent focus of the telephoto, other things remaining the same, is different from each distance of the object.

THE F VALUE OF THE APERTURE AS A MEASUREMENT OF THE RAPIDITY OF A LENS.

The true measure of the rapidity of a lens when photographing any given object is the *cf* value of the

aperture; in other words, the back conjugate focus divided by the aperture (effective). In the case of objects at a moderate distance the back conjugate focus approximates sufficiently nearly to the focus of the lens to permit of the substitution of the f value in place of the cf value of the aperture. This is the ordinary practice of photographers. For near objects the cf value should always be employed.

All formulæ for conjugate foci are based on the assumption that a pin-hole aperture or theoretically thin lens is employed. This very much simplifies the matter; but it is apt to cause trouble in some cases. For instance, if we are working life-size, each of the conjugate foci would be twice f , and consequently the distance from the object to the screen should be four times f . This would be nearly right if the lens were very thin. But with any compound lens a sharp focus cannot be attained without sensibly increasing the distance. The correct amount for any lens of large aperture may be ascertained by a simple experiment, provided that you have sufficient length of camera extension. A distinct mark—say, a cross—should be made on a sheet of printed matter, such as newspaper. This is then set up at an angle. The camera is placed with its screen at a distance from the object-mark on the printed sheet exactly equal to four times the focal length. It will now be found impossible to get a really sharp image of the mark on the screen; but the letterpress a little beyond it can be accurately focused. The distance between the mark and the nearest letterpress which can be sharply focused is the addendum due to that lens, which should always be added to the calcu-

lated distance between the object and screen when enlarging or reducing with that lens.

ORDINARY AND TELEPHOTO LENSES.

Although this peculiarity exists in all lenses, and ought to be understood, it is not of vital importance in the case of ordinary lenses; but with telephoto lens, on no account can it be neglected.

As an example, I take a lens which I tried some years ago. The positive was 6 in. focus and the negative 3 in. The separation was about 5 in. For distant objects this gave a magnification of $1\frac{1}{2}$ diameters — that is, the equivalent focus would be 9 in., and the back conjugate focus of a distant object would be the same amount. If this lens were focused on any subject 42 in. from the camera, the magnification would be three diameters and the back conjugate focus 21 in. The ordinary rules would give a back focus of about $12\frac{1}{2}$ in. for a lens of usual form, having a focus of 9 in. under the same conditions. I think that the above shows the utter absurdity of introducing the equivalent focus into telephoto calculations, excepting when dealing with subjects at a very great distance. If you focus by extending the camera the ordinary rules will not apply, and you cannot adjust the distance between the elements without at the same time altering the equivalent focus.

THE "SPEED" OF A TELEPHOTO LENS.

As has been shown above, neglecting minor influences, such as the quality of the glass, number of reflecting surfaces, etc., the speed of any lens depends on two main factors:

1. The effective aperture.
2. The back conjugate focus when in use.

The proper exposure is proportion-

ate to the square of the back conjugate focus divided by the effective aperture.

BACK CONJUGATE OF A TELEPHOTO.

The back conjugate focus, when ordinary lenses are employed on subjects at a distance, approximates to the camera extension. But with a telephoto it very much exceeds this length. The back conjugate focus may be defined as the camera extension required to secure an image of the same size as that given by the telephoto lens, by a pinhole situated in the same plane as the front surface of the lens combination. Perhaps it may be well to remind the reader that the conjugate foci, the object and the image are in the following proportion:

Size of object: size of image: front conjugate focus: back conjugate focus.

HOW THE TELEPHOTO AFFECTS FOCAL EXTENSION.

The clearest method of dealing with the subject appears to be to illustrate it by an example. For this purpose I have selected one given by Dr. Rudolph on page 14 of his monograph of telephotographic objectives.

The example is that of a full-size image of an object situated 99 in. from the lens. In order to simplify figures I have substituted 100 in. for 99 in. For convenience we will assume that we have an imaginary lens—say, of the stigmatic type—the focus of the front element being 50 in., and that of the whole 25 in. If the front element alone be used, the conjugate foci will be equal to 100 in. each, and therefore the image will be full-size. But the camera extension required would be 100 in.—a highly inconvenient length.

Adding the back element of the stigmatic makes the focus 25 in. A simple calculation will show that with this focus and a front conjugate focus of 100 in. the back conjugate focus will be 33 1/3 in. In the correct position behind the lens we place a suitable negative lens with a screen fixed at a distance of twice its focus behind it. With the screen in this position the negative will magnify the back conjugate focus of the positive lens three diameters, bringing it up to 100 in. as before—that is, equal to the front conjugate focus. Thus, again, we obtain a life-size image. In both cases the conjugate foci are identical, and the aperture remains unaltered. Therefore, the speed will be exactly the same. The only difference will be that the camera extension is reduced to manageable proportions. I have intentionally abstained from giving any value to the negative, because it has no influence on the exposure when the magnification is unaltered. It is a matter to be determined from the focus of the positive, the magnification, and the size of plate to be covered.

THE SAME PROBLEM VIEWED DIFFERENTLY.

If we approach the subject from the standpoint of using an ordinary and a telephoto lens of equal equivalent foci, the results will be less simple.

The equivalent focus of the front element of our imaginary lens remains 50 in., and that of the complete lens 25 in. The latter must be supplemented by a negative and by a screen fixed at its focal plane. This will double the focus of the positive, bringing it up to 50 in., the same as that of the front element. As before, the

front element will give a full-size image of an object 100 in. away. The whole positive element will have a back conjugate focus of 33 1-3 in., as we have already seen. Multiplying the back conjugate focus by the magnification—that is, doubling—we obtain 66 2-3 in. Thus, the image will only be two-thirds life-size. (At the same time, the exposure required will be less than one-half.) There are two ways of increasing the image to life-size. We may move the screen back to its original position with regard to the negative, or we may move the lens to a new position 75 in. from the object. Either course involves altering the distance between the positive and negative elements, and consequently an alteration of the equivalent focus. I think that the above will show the utter futility of introducing the equivalent focus calculations except in the case of very distant objects. The

proportion between the foci of the positive and negative elements is quite as useless as the equivalent focus, and serves no purpose beyond complicating the matter.

WHAT TO EXPECT FROM YOUR TELEPHOTO.

It is sometimes claimed that a telephoto gives better perspective than an ordinary lens. This is only true in so far as a telephoto will enable you to increase your working focus. If the distance from the object and the size of the image be the same, the perspective will be the same whether the lens employed be a pinhole, a single glass, a telephoto, or any other lens.

The two important points in which the telephoto differs from other lenses are the variability of focus and short camera extension as compared with the back conjugate focus.—*British Journal of Photography.*

IMPROVED METHODS IN HIGH-SPEED CHRONOPHOTOGRAPHY.

BY DR. ALFRED GRADENWITZ.

Instantaneous photography, and especially the chronophotography of a moving object, have enabled us to recognize the true nature of some animal motions of which we have had but very hazy conceptions. The operation of the cinematographic camera consists essentially in moving a sensitized film behind a photographic objective, and stopping it for a moment at regular intervals while an exposure is made. For ordinary purpose a rate of ten to twenty views per second is quite sufficient to photograph the different phases of motion. On viewing in a similar intermittently working outfit the series of photographs taken, the impression of a continuous motion is produced. For more rapid movements, however, the rate men-

tioned proves insufficient, and the late Professor Marey, of Paris, who paid especial attention to the phenomena of motion, designed some ingenious means of abridging the time of exposure, and thus increasing the number of photographs taken in a second. By intercepting the beam of light with an interlocking disk fitted with narrow slits and rotating at a high speed, he was able to obtain photographs of flying insects in 1-25,000 second. The same process was subsequently made use of by Lendenfeld, who succeeded in reducing the time of exposure to 1-42,000 second. He was the first who succeeded in employing a continuously moving instead of an intermittently moving film for the dissociation of the images by means of his high

frequencies. By employing a rapidly oscillating mirror he produced on a fixed plate images which were separated by intervals of 1-2,150 of a second.

The series of images obtained by this

with the speed of displacement of the image.

Now, Mr. Lucien Bull, of Paris, the collaborator of Professor Marey, further developed Marey's ideas. By using the

Fig. 1.—Bull Chronophotographic Camera with Cover Removed.

Fig. 2.—The Bull Chronophotographic Apparatus.

method are rather short and hardly adapted for a synthetic reproduction of motion. Moreover, they are somewhat blurred owing to the time of illumination, which, despite the rapidity of exposure, is still too great as compared

electric spark as a source of light he was able to effect dissociation of extraordinary rapidity without losing definition.

In order to obtain a series of images at constant distances, which is a neces-

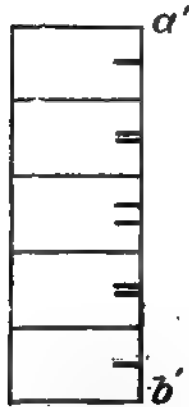


Fig. 2a.—Marks Made by Tuning Fork and Indicating Time of Exposure.

sary condition for effecting the synthesis of the analyzed motion, Mr. Bull produces the electric sparks at intervals corresponding to equal displacements of a film.

The outfit used by him is represented diagrammatically in Fig. 4. In a camera box, *A*, a cylinder, *B* is mounted on a horizontal shaft. To the same shaft is fitted outside of the camera a rotary current interrupter, which is connected with the primary winding of an induction coil, *D*. The induced current is allowed to flow to a Leyden jar condenser, *F*, the spark passing at *E* between two magnesium electrodes in front of the lens, *G*, which concentrates the rays on to the objective, *O*, in the focus of which the cylinder rotates. This cylinder carries a sensitized film and is rapidly turned. At each revolution a number of sparks corresponding with the number of contacts on the interrupter passes at *E*. The shutter is thereupon opened during one rotation to obtain a series of images at constant distances apart of an object placed between the lens, *G*, and the objective. The shutter is a

double shutter and is opened at the given moment by a cam on the edge of the cylinder. The closing of the shutter is effected automatically at the next revolution by the same cam.

Fig. 1 is a photograph of the apparatus, with the cover removed. There are two objectives and two films, so that the apparatus is adapted for taking stereoscopic views.

Fig. 3.—Optical Condenser Used with the Bull Chronophotographic Camera.

The cylinder is 35 centimeters in diameter, and 10½ centimeters in breadth. There are 54 contacts on the interrupter, thus breaking the current fifty-four times for each revolution of the cylinders. Consequently fifty-four photographs are taken in one revolution. The images are focused by means of a finder comprising a mirror inclined at an angle of 45 degrees, and located immediately behind the objective. Before making an ex-

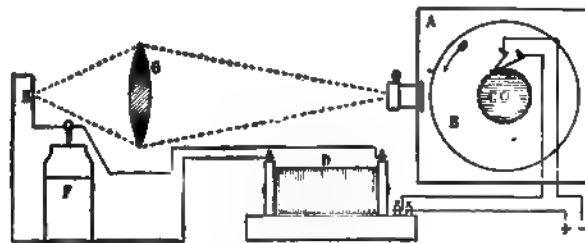


Fig. 4.

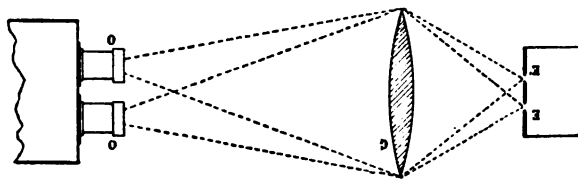


Fig. 5.—Apparatus Arranged for Stereoscopic Photography.

posure this mirror is lowered by means of a button seen to the right of the finder in Fig. 1.

In Fig. 2 the entire outfit is shown ready for use. Below the objective is placed the electric motor driving the cylinder of the

apparatus. At *A* a tuning fork is mounted, performing fifty double vibrations per second and serving to register the time of each exposure. For this purpose the ends of the prongs are photographed while in vibration, together with the objects experi-

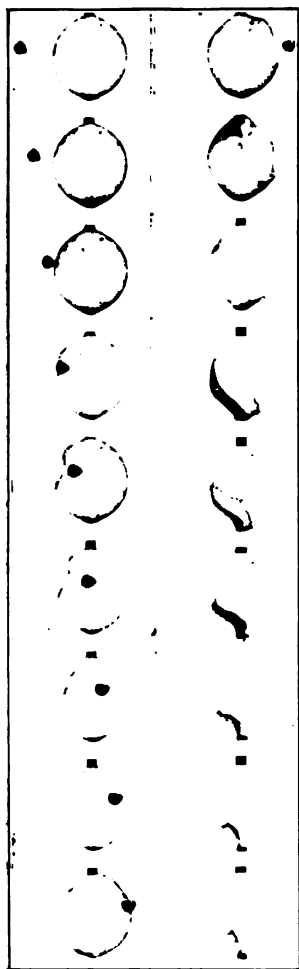


Fig. 6.

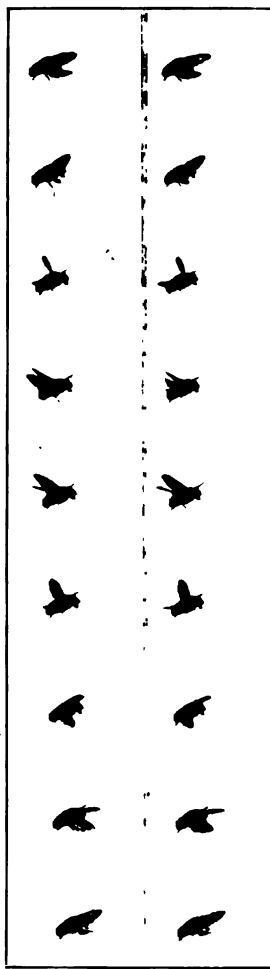


Fig. 7.

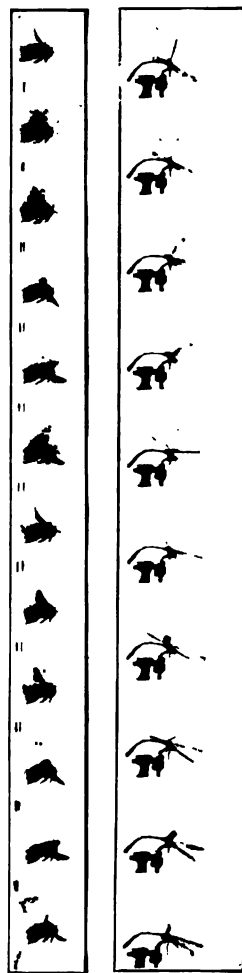


Fig. 8.

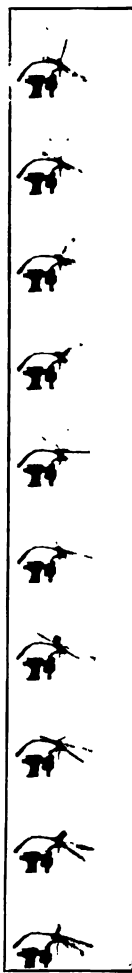


Fig. 9.

mented on. The different positions of the prongs indicate the time as shown in Fig. 2a and in Fig. 8. From *a* to *b*, that is, from one coincidence of the two branches to the other, a half vibration is performed, corresponding with 100th of a second. By counting the number of images between two such coincidences, the frequency at which the views are taken is obtained.

At *B* (Fig. 2) is seen an optical condenser, which is shown separately in Fig. 3. This condenser constitutes the luminous field on which the object comes out clearly. In the same figure are shown the two magnesium spark gaps.

At *C* (Fig. 2) is a rotating mirror, which, though not indispensable, proves useful for ascertaining whether the sparks succeed one another at regular intervals. On the table are further represented the induction coil, placed on a condenser of great surface, a Leyden jar, and the electrical resistances. In Fig. 5 is a diagram showing the apparatus as used for stereoscopic views. Two sparks are produced in the same circuit, giving two distinct beams of light directed toward the corresponding objective. *E E* are the spark-gaps, *G* the optical condenser, and *O O* the objective of the apparatus.

Fig. 6 shows a series of images of a soap bubble which is traversed by a paper pro-

jectile thrown by a spring. In Fig. 7 is seen an ordinary fly in stereoscopic views (*a* and *a*). To the right is shown a millimetric scale, by means of which the displacement of the object is measured, and the tuning fork prongs giving the speed at which the images are obtained. These views were taken at the rate of 1,100 per second, whereas the bee represented in Fig. 8 in horizontal flight was photographed at the rate of 1,200 images per second. In Fig. 9 is seen a libellule (*Agrion puella*) on starting. These images were obtained at the relatively moderate speed of 600 images per second. One of the images composing this is magnified in Fig. 10. The highest speeds so far obtained are more than 2,000 views per second, but Mr. Bull is of opinion that with specially constructed induction coils far greater frequencies can be obtained.

It should be remembered that the aggregate time of exposure is quite inappreciable as compared with the intermediate intervals of darkness. In fact, the duration of each spark has been calculated to be only about the 2,000,000th part of a second. As the distance traversed by the film during this minimum interval is quite inappreciable, the image is as sharp as may be desired.—*Scientific American*.

Fig. 10.—An Enlarged Picture Taken by the Bull Apparatus.

Prints for criticism; only one at a time and only once each month; to be sent to Dr. John Nicol, Point o' Woods, L. I., N. Y. The coupon found in our advertising pages must be attached to the back of each print.

1997. S. F. CLOWNEY.—"The Shower." Two figures walking in a shower — the one coming, the other going—is probably the best that could be done with the lens employed, but to do it full justice it should have been of longer focus and considerably more rapid. The too short focus is shown by the fact that although the figures have little more than passed each other, the distance between them being only half an inch, the nearest is just twice the height of the other. While the negative probably got all the time permitted, the necessity for a more rapid lens is shown by the fact that although development has been pushed till the lights are far too strong for the effect desired the shadows are without detail, even the face being hidden. But except for those faults, due to the use of an unsuitable lens, the picture is very good, and without them would have been fine indeed.

1998. F. SOLOMON.—The nameless print, a mass of foliage with what may be either a part of a rustic fence or a rustic seat, is of no particular interest, and is very much too dark, either from under exposure or under development and perhaps from both. But for the rustic fence or seat we should have thought it a part of a swamp, but in any case the lack of interest, arising from the lack of anything of more interest than another, makes it a subject hardly worth photographing, from this point at least.

1999. W. C. WEBSTER.—"Dreary," a tree with its finer branches covered with what appears to be hoar frost, and with what looks like patches of snow scattered all

over the foreground, and it is certainly "dreary" enough to deserve the title. From a pictorial point of view, however, we do not feel that it is a success. The placing of the main tree so exactly in the centre, and the scattered patches of white all over the foreground leaves the eye nowhere on which to rest, so that the oftener we go to it the less we like it, just the opposite of what, with a good picture, it should be. In short, the photography is good enough to deserve a better subject.

2000. T. C. LEITER.—"A Halt for Inspection" A woman and a girl seated in the open in front of a fence, the latter evidently examining the contents of a small box, probably of candy; with two parasols, one open the other shut; the whole giving evidence of careful composition, but with more care than success. The two figures too closely repeat the angles and the open parasol, especially when it is so dark, makes its side far too heavy. In spite of these faults, however, it might have been a fairly good picture but for the terribly false values. The contrast between the white and the black is far too great, and there is far too much of both and far too little of tones between. Under-exposure is the cause—under-exposure leading to a far too protracted development, while twice as long of the one and half as long of the other would have resulted in good technique and fairly good pictorial effect.

2001. H. W. DURGIN. — Of the four prints sent we select for notice the best, "Sargent's Drive," although that it is a pretty photograph of the "record" variety

No. 1960.

IN SUMMER'S GRASP.

Dr. F. E. Weeks.

No. 1976.

IN WINTER'S GRASP.

John F. Jones.

is the best that can be said of it. From a pictorial point of view the absolute lack of atmosphere is a fatal fault, the extreme distance being as sharp as the foreground. It is refreshing, however, to find a print from a sufficiently exposed negative, and this is of correct technique in all its stages. "Skull Rock" is a curiosity in its way, but the pen work you have done on it throws it out of court. Don't, please, send more than "one print" in future. We don't like to throw prints into the waste-basket, but storing is troublesome.

2002. F. W. GRANT.—"Cruiser Chicago." A strip about 6 x 2, with an inch-and-a-half of cruiser near one end, and an indication of two ships or yachts near the other, is meant, we suppose, to be decorative, and, for some purposes it might be so, but it is not, to us at least, of much interest. It is too small to be interesting as a ship, and does not impress us as of use for any purpose.

2003. J. A. YOUNG. — "Where Wave Meets Rock." A marine picture spoiled for want of trimming, there being far too

much dark, and too unsuitable foreground. Trimmed so as to just lop off all in line with and including the square stone in front, you would have a fine example of "the breaking wave."

2004. E. A. DONNALLY. — "Summertime." Three children in a swing is fairly good, and might easily have been better. A longer exposure and shorter development would have given better values, especially in the distance and sky. We should also have liked to see the branch from which the rope is suspended. The arrangement, however, is good, and with better values, that is, longer exposure and shorter development, would have been an attractive picture.

2005. H. H. HARVEY. — "Mother and Child," however hackneyed, never seems to come too often. While the position of the mother is quite natural, the angle, especially balanced or rather contrasted as it is by the chair back, makes an unfavorable impression, and the white drapery of both figures is lacking in the light and shade that, when properly represented, gives it such a charm, and which can only be so represented by developing with solutions very weak in reducer. These faults aside, however, the figure of the child is worth careful study. Rarely have we seen the flesh texture so perfectly reproduced, or an effect so charming. Face, hands and feet, especially when examined by a lens, have the peculiar transparency so frequently seen in babyhood, while the expression of wonder and almost of enquiry is so perfect that we can imagine an enlargement to life-size of the child alone, using the knees of the mother as now, as its seat, as a most wonderful and delightful picture.

2006. L. D. ROWELL.—"A Grey Day" does not impress us favorably. It does not, to us, suggest the "grey day," but rather a print from a properly exposed but under developed negative, development having been stopped before contrast began to be built up. Nor does the subject, from this point, at least, appear

2005.

H. H. Harvey.

MOTHER AND CHILD.

No. 2000.

A HALT FOR INSPECTION.

T. C. Leiter.

2

No. 2001.

SARGENT'S LEVEE—LOOKING DOWN THE SOUND,
Bay Harbor, Me.

A. W. Durgin.

as worth photographing. It appears as the back or end view of an old home with surrounding sheds and out-buildings, all of which, in such cases, are generally concealed as much as possible. Then while house and sheds are apparently, indeed, the only objective point, the rather assertive fence on the right seems to carry the eye along and away beyond it instead of to it. Taking it all in all, we should hardly consider the negative worth printing, even although you have very decidedly made the very best of it.

2007. T. C. KEYS. — The photograph of a flower is probably as good as you could make by flashlight, but that is not saying much in its favor. The arrangement — a perpendicular stem with a cluster of structureless black leaves, is perhaps the most unartistic that could be made, while the "dead" white background makes an unpleasant and too severe contrast. The flower itself is the only redeeming point, but even with it the negative is not worth printing. What tempted you to use flashlight when so much daylight is available?

THE HUMAN TORPEDO.

Photographed with a Cooke Lens.

This picture secured the First Prize of \$100, offered by the *New York Evening World*, for the best photograph of Luna Park. It was made by Matt Stratton, between 5 and 6 p.m. on a dull night, with a heavy mist off the sea.

Books for review and apparatus and material for examination and report to be sent to Dr John Nicol, Point o' Woods, L. I., N. Y.

FROM MESSRS. TAYLOR, TAYLOR & HOBSON, St. James Building, New York, we have received a copy of their new catalogue which tells all about the Cooke lenses and other products of this progressive firm. The catalogue is not dry reading by any means, and in it will be found many valuable hints about lenses and their distinguishing characteristics. They will be pleased to send a copy to all who are interested in lenses, also a copy of "The Principles of a Lens' Action" for the asking.

* * *

DR. EDWARD BURTON McDOWELL has lately returned from an extensive trip in Panama, where he did a large amount of photographic work. In a letter concerning this work, in which Dr. McDowell most interestingly relates some of his photographic experiences, he takes occasion to pay a very high tribute to the excellence of the Hammer Orthochromatic plate, which he considers unequaled for work of this kind. He says in part, "Your Orthochromatic is my ideal, and I am sending you herewith prints to illustrate its Ortho qualities; in fact, I am greatly elated over my success, for my negatives run very evenly for quality, etc."

* * *

J. H. DALLMEYER, LIMITED, of London, England, makers of the famous "Dallmeyer Lenses," heretofore represented in this country by Anthony & Scovill, have entered the American market direct, and have secured the services of Mr. F. G. Burgess, late of the Rotograph Company, and prior to that the traveling representative of C. P. Goerz as

American representative. Mr. Burgess is one of the best posted lens men in the United States, and we are glad to hear of his engagement by the Dallmeyer people. It is, we understand, the intention of the company to open offices in New York later on; as for the present Mr. Burgess will make a trip throughout the United States and Canada; in the meantime he may be addressed care of P. O. Box 1,891.

* * *

CAMERA WORK.—It is often said that we see in a picture just what we bring to it, and to a certain extent at least, the same may be said of the literature we read. With due allowance for that we say without hesitation that the July number of Camera Work is, good as they were, ahead of all its predecessors. In giving the six examples of the work of D. O. Hill, or more correctly "Hill & Adamson," as it was spoken of at the time of its production, the editors have laid their readers under a debt of obligation that the subscription ten times over could not pay; especially, strengthened, as it is, by the brief but accurate biographette of Hill himself, by J. Craig Annan. Valuable too is the opportunity herein given of comparing the old with the new, in the reproduction of some of the work of Steichen, Demachy and Hinton; and without any idea of comparison, we may safely say that the old quite holds its own.

Nor is the reading matter behind; indeed it, as compared with previous numbers, more than holds its own. Without altogether agreeing with Roland Rood in his theory of the origin of the "Poetical Feeling in Landscape," we read

This block, from start to finish, was the work of one of the students of the Illinois College of Photo-Engraving.

it with pleasure, as we do also his opinion of painters as judges of photographs. While we can see that in this article Rood has been influenced to a considerable extent by Stieglitz, who has always differed from us in our opinion as to the fitness of painters as judges of photographs, the article has left us in the same opinion still, although a jury of painters should always include one or two photographers as advisers.

Pictorial photographers will rejoice at the information contained on page 57, the recognition of photography as a fine art, by the authorities of the Lewis and Clark Exposition, on the walls of which are hung twenty-five examples of the work of some of the best men in the country. On the same page is the only notice that we do not like. We had been promised some of the notices given to the work of the photo-secession in the various European countries to which they had been sent, and now the authorities have thought better of it, or in our opinion thought worse, and decided to withhold the favorable notices because they have been accused of conceit, etc., etc. They should know that they are strong enough to laugh at all such ignorant traducers and realize that all right-thinking men and photographers rejoice in all the good that is said of the work of their fellows.

While photographic journals generally are of interest only to photographers *Camera Work* must be of interest to every lover of the beautiful, and while it is necessarily more costly than most, every number contains several pictures each of which is worth vastly more than its subscription price.

* * *

THE PHOTO-MINIATURE No. 68 deals with "Decorative Photography," although hardly with its usual virility. The author brings to his work the grave mistake of supposing that "the possibilities of photography as a purely decorative agency, apart from relation to pictorial work, have been overlooked;" ignorant of or ignoring the fact that for more than a quarter of a century photography, both alone and in conjunction with hand drawing, has been employed for decorative purposes to a very large extent. But

while the book is not what we would have liked or expected, and is confined to the decoration mainly of book and magazine covers, calendars and Christmas and other cards, it might be of considerable use to the many younger amateurs who are anxious to make their work pay its cost and a little more, and to such we heartily recommend it.

* * *

THE EIGHTH ANNUAL CONVENTION OF THE ILLINOIS PHOTOGRAPHERS' ASSOCIATION.—The block from which the halftone on another page was printed is the work of one of the students in the Bissell College of Engraving, Effingham, and may be taken as a fair example of what may be learned in a comparatively short time under such competent teachers. A photographer who is also an engraver has a great advantage over one who is not. We have just learned that Mr. Bissell has purchased the commodious buildings of Austin College, which will hereafter be the home of the College of Photo-Engraving.

* * *

WITH THE CAMERA, the monthly notes from the Illinois College of Photography, tells of continued progress both in the number of students and in facilities for their education. Several students, including one each from Turkey and Japan, have returned for further study—post-graduate work probably—and several new ones from the latter country. The triumphant "Soldiers' Return" should find plenty of work for photographers, and surely *such* soldiers deserve the very best photographs.

According to the circular, work and play go hand in hand, and "hay-rides" and picnics are the order of the day and the night, too, the latter giving opportunity for professional practice with flash-light pictures.

The entries during the past month have been fourteen, including two Japanese, and the rest from eleven different States.

* * *

FROM THE FOLMER AND SCHWING COMPANY, makers of graphic cameras, comes a list of a lot of their excellent cameras which, on account of increased demand

for their Graflex cameras, they are obliged to clear out, and at prices which should tempt all who are or are likely to be in the camera market. Just think of a $6\frac{1}{2} \times 8\frac{1}{2}$ reversible back long focus Graphic camera, with double swing back, rising and sliding front, etc., for thirty-five dollars, twenty dollars below list price, and all others at about the same discount.

* * *

THE PHOTO-MINIATURE No 69 deals with "Printing-Out Papers," T. Thorne Baker being the author, and while he has probably said about it all that was to say, he has said little or nothing that was not known to the usual "everybody" before.

The number, however, is fully redeemed by an article by James Thomson, on "Kallitype to Date," that is well worth many times its cost.

* * *

THE SIMPLEX EXPOSURE METER.—From the Knowlton Co., the makers of this useful exposure meter, come several film negatives exposed according to its indication, and they are as nearly perfect as we can expect to come; full of the most delicate detail and in perfect gradation. We have tried the meter several times with perfect success, although at first we had a slight difficulty in deciding which of two holes was the one to choose. A description of the meter will be found on page 299 of our June number.

Mr. Knowlton gives the following information regarding the negatives already mentioned:

The three negatives exposed (about) half-hour after sunset in the twilight, with the Simplex. Exposures seven and ten minute sixteen stop. Machine developed, six minutes in Pyro sixty degrees.

This "feat" is impossible with any other form of meter on the market that measures light, as the value of light changes very rapidly in twilight half-hour after sunset.

* * *

We show herewith a cut of the Jupiter electric flash lamp for photographers, a new device of German construction. This is the

most powerful electric lamp known for making negatives without the aid of daylight. It will make fully-timed negatives up to eight by ten in one-thirtieth of a second, when a quick lens is used, and can be used for larger work if more time is given.

The lamp is intended to fully replace daylight in the studio, can be used for either time or instantaneous exposures, or the exposure can be started as a time exposure, and when nearly sufficient time has been given the power of the light can be more than doubled for the last instant of exposure. Its speed is so great that negatives showing no movement can be made of restless children and nervous people and the negatives produced by this light cannot be told from daylight exposures. The lamp is safe to handle, for though it may use a current of 220 volts and thirty amperes, the lamp is so arranged and protected that

THE JUPITER LAMP.

there is no danger in using it with ordinary care.

As will be seen by the illustration the apparatus consists of two parts—the rheostat or resistance box (fastened permanently to the wall) and the lamp with its tripod (which are connected to the resistance box by a flexible cable.)

Any electrician can install the apparatus and the whole time of setting it up should not be more than two hours. The lamp can be ordered for direct or alternating current and can be constructed for either 110 volts sixty amperes or 220 volts thirty amperes.

The Jupiter lamp was exhibited in the

Cramer booth at the World's Fair and our representative at the Convention obtained a fully timed negative of a group of photographers who were present at the demonstration of the lamp. He carried a 3-A kodak, and this was held in the hand, the lens being opened just before the electric switch was pulled. That there was no blur in a negative obtained in this way proves that the flash is quick enough and brilliant enough for portraiture. The outfit is rather expensive, but for use in the large cities its efficiency offsets this. The G. Cramer Dry Plate Co., St. Louis, Mo., are the American agents, and they will be pleased to answer all inquiries.

THE OBIFO DAYLIGHT PROCESS.

The above cut is an electrotpe from a half-tone, and therefore is lacking in fine detail. The print from which it was made

was from a negative by the Obifo daylight process, and is a fair sample of what the method will do.

OUR OPEN COMPETITION.

"The Approaching Storm," by R. E. Weeks, Chicago, Ill, which we reproduce on page 363, receives the first award this month; "Roses," by S. F. Clowney, Newark, N. J. being a close second. Five dollars is offered each month for the best pictures submitted. There are no restric-

tions or rules, and the senders need not even be subscribers to the magazine. All we ask is that each send his best work only and mark the package, "For Competition."

Mattie S. Mitchell and Wm. A. Haller please send full addresses.

Secretaries of Societies, or Camera Clubs who want their meetings reported or who have communications of interest to photographers that they wish to have published should send them direct to Dr. John Nicol, Point o' Woods, L. I., N. Y.

Photographic Section, Academy of Science and Art, Pittsburg, Pa.

The First Annual Photographic Exhibition will be held in the East Liberty Branch Y. M. C. A. building, September 15th to 23d next.

The following rules and regulations have been adopted:

No awards are offered and no charge will be made to exhibitors.

Each exhibitor, whose work is accepted by the jury, will receive the official catalogue of the exhibition.

Any number of prints may be submitted.

Pictures must be sent framed (with or without glass) or matted under glass.

Each exhibitor must place his name and address and title of picture on the back of frame. Nothing must appear on face.

No accepted pictures may be removed before the close of the exhibition.

All pictures must be forwarded at owner's risk (carriage prepaid) to Dr. Roger Williams, 103 South Highland Avenue, Pittsburg, Pa., not later than August 31, 1905. Return charges to be paid by the exhibitor.

Entries are limited to those living within a radius of 100 miles of Pittsburg.

It is understood, unless expressly forbidden by the exhibitor, that the Society shall have the right to reproduce any accepted picture.

The management will use all reasonable care to prevent any loss or damage to pictures in its charge, but will not be responsible for any damage.

Arrangements will be made for the sale of pictures if so desired, subject to a commission of fifteen per cent.

It is the object of the Section to give an opportunity to all persons interested in pictorial photography, as a distinctive branch of art, to exhibit such photographic work as will best show artistic feeling and expression.

To this end all are cordially invited to submit such works for the judgment of the Jury of Selection.

The secretary, Mr. J. M. Conner, of the East Section, should be addressed for further information.

Since the exhibit by the Section last February of the work of the First American Salon we are advised that twenty new members have been added to the roll. Plans are perfected for the exhibit of the second American Salon next January.

Chicago Camera Club.

The following officers were elected at the annual meeting of the Chicago Camera Club, held in its rooms on June 1st

J. L. Rosenberger, President.

George T. Power, Vice-President.

W. H. Edwards, Treasurer.

F. M. Tuckerman, Corresponding Secretary.

A. C. Roebuck, Financial Secretary.

D. H. Brookins, H. C. Knobe, Directors.

Plans for the ensuing year are such as will prove attractive to members and insure increasing interest in photographic art on the part of club members and the public

LETTERS TO THE EDITORS.

DEAR SIR:—I read your criticism of my "Winter" and am tickled to death as it were, that I came near making a picture. I will soon torment you with another.

But, Dr. Nicol, it seems to me that your ideas as expressed in the "Portfolio," are not carried out in many of the prints that are published in your magazine, and are supposed to be fine examples of photographic art. Many times I've noticed the seeming inconsistency contained in one number. For instance, you say "trees are never black," or "there is no blackness in nature," and in the same book publish the picture, "Drifting Snow," with a tree in it that is the blackest ever. Again a picture is criticised as being record of fact instead of pictorial. Then comes a "Fish Study," as hung in a camera salon as an artistic bit. And such a picture as "Sunrise on Lake George." Where, oh where, is the art in it?

Yours truly,

H. W. STURTEVANT,
40 Maple St.,
Springfield, Mass.

P. S.—The "Portfolio" is great. Don't stop it for ten "Ludlows."—H. W. S.

[Our much-respected contributor makes the common mistake of supposing or taking it for granted that we reproduce in our pages only such photographs as appeal to Dr. Nicol by their pictorial or

other qualities, instead of realizing that art is many-sided and that the magazine, while doing its best to teach, must show, not one but as far as possible all those sides—must cater, not to one but to all classes of its readers. Regarding the fish picture to which he refers, although such pictures are not the highest kind of art they may, in the hands of a true artist, be given true pictorial qualities. Nor does it follow that because a photograph has been hung in what our correspondent calls a "camera salon" it is necessarily a work of art except in the estimation of the jury that selected it, certainly not necessarily in ours.

It should be clearly understood that Dr. Nicol, as he has again and again said, claims no more for what appears in "Our Portfolio," than that it is the opinion of one man, and that it is no more likely to be "the last word" than the opinion of another who may differ from him. Between the portfolio and the illustrations that appear in the body of the magazine there is no connection whatever, and therefore there can be no inconsistency; the one is intended to be helpful to such as think they need it and care to seek it, while the other has various sources of inspiration and is intended to serve various purposes.—Eds.]

Questions for answers, matters for publication, and all communications to the editors should be sent to Dr. John Nicol, Point o' Woods, L. I., N. Y.

Caramel Backing and the Working Aperture of Lens.

CARL T. ENG.—Your caramel backing remained "sticky" because it was not the right kind, made for coloring purposes probably.

To make the right kind is rather a delicate job, instructions for which will be found on page 432 of our 1903 volume, the September number. On the whole, however, unless you want to go into it commercially, it will be cheaper and better to buy the

backing than to make it, and we know that the "Redfield Backing" made by Pancoast, 1213 Filbert Street, Philadelphia, contains caramel. You might use it with advantage.

Your professional friend was wrong, as not on the diameter of the lens, but on the relative size of the stop depends the rapidity of that lens. Practically, within ordinary limits, all lenses, no matter what their diameter, have the same rapidity with the same stop value. We have before us now two lenses—one of six inches, the other twelve inches focal length. The one has a diameter of two inches, the other one and one-eighth, but both have the same speed when stopped down to, say $f/8$. The small one, however, is said to be four times as fast as the larger because it works at $f/4$.

Vignetting.

P. E. SKINNER.—We do not understand what is meant by "directions for onion skin vignetting on P. O. P.," and have never heard of it either as a method or a result. Perhaps some of our readers may be able to reply to our correspondent, and if so we shall be glad to hear from them. "Onion skin" is the name given to a fine and tough species of tissue paper. It may be attached to the printing frame as ordinary tissue, but on account of its strength is more amenable to working up with pencil or color to shade portions of the negative.

Do Not Expect Too Much.

VERITAS.—We do not print your letter for two reasons. You do not give us your name, not necessarily for publication, and your language is much too intemperate for the subject, even if your belief was correct, which it is not. You do not seem to have noticed the fact that the distributors of the paper in question do not claim that printed under an ordinary negative it will give a print in the colors of nature, or in the natural colors of the subject. The most claimed is that a print in colors, although it so happens that the relative densities of most negatives are such that in most cases the colors are a pretty close approximation thereunto. Read more carefully the literature accompanying the paper and you will find the "swindle" to be a creation of your own brain.

Use of the Combined Bath.

AMATEUR.—Your toning solution, so far as we can see, is right, and should give tones varying from warm brown to purple brown, depending on the strength of the negative and the depth of printing. Of course we are taking it for granted that you added the solution of gold to the solution of hypo, and not the reverse. The print has evidently not been deep enough printed, and it looks as if also from a too thin negative. In any case it has been much overtoned, gone into the slaty-blue, always a result of keeping it too long in the solution. The bath is giving dozens of our readers and others just such tones as they want, but good tones depend on good negatives and deep enough printing, neither of which you have been making or you would not need to complain of it. The time in the solution depends both on the temperature and on the depth of printing, but a good print and at a temperature of from 55 to 65 F, generally will be sufficiently toned in about ten minutes. Examine the print from time to time by transmitted light, and when the reddish color has almost but not quite gone remove it to the washing tray or tank. The prints get a little darker on drying, and the bath will give better tones after the toning of a few prints than when quite new.

For the benefit of those who read our "Answers" we may say that the formula referred to will be found on page 98, our February number.

Copyright.

R. W. MULLER. — We have answered at least a dozen times. Not the subject, but his photograph thereof can be copyrighted. If you can get permission to photograph the window, even if you take it from the same place in the same pen, you may print and sell as many copies as you can find buyers for. But, judging from the photograph sent, you ought to make a better job than your predecessor has done. He has worked from too low an elevation and not used the swing back as is evident from the fact that the astragals converge toward the top. From a gallery, if there be one in the church, would be a better position, and if not, then take advantage of the swing back.

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THE LATE JOHN CARBUTT.

It was with more than ordinary feelings of regret that we learned of the death of our long-time friend, John Carbutt, briefly noticed in our last, and which occurred at his home in Germantown, Philadelphia, on July 26th, at the ripe age of seventy-three years, during the last four or five of which, ever indeed since suffering from a serious carbuncle, he had not been in his previous state of good health.

An Englishman, coming to this country in 1853, just when he had attained his majority, he soon drifted into photography, which he practised with considerable success in Chicago, where I first met him in or about 1886, by which time he had settled in the vicinity of Philadelphia, his early successful experiments in dry-plate making having induced him to go in for it on a commercial scale. Like many others, however, of an experimental turn of mind, from then till his call came he had done more for the benefit of others often too in a commercial sense, than for himself, although, knowing him as I did, I believe he

was happier in what he did and the way he did it than many of his competitors, whose main aim in life was the building of the "pile."

Amongst other improvements in photography to which he gave attention was color sensitiveness or the orthochromatizing of his plates and films, and he was the first, and for a considerable time, the only one to put them on the market. This led him to study the screen question and to introduce screens for various purposes, and especially for the several brands of his own plates as well as for those of other makers. In connection with this I may say that although it has often been said, even by expert orthochromatic workers, that screens are useless, or worse, on ordinary plates, he made for me and afterwards added it to his list a greenish-yellow screen to be employed with any ordinary plate for the reproduction of white clouds on a blue sky by which have been produced some of the finest cloud negatives that I have ever seen.

Ives' experiments in three-color

work early attracted his attention, resulting, amongst other things, in the introduction of his panchromatic plate and set of three screens or color filters that leave little or nothing to be desired, and also a "safe-light" for the development of the plates that is practically really safe even with more than usual, and, indeed, quite sufficient illumination.

Naturally of a quiet retiring disposition, the kindliness of his nature and the depth of his knowledge had to be discovered; but he was a warm-hearted friend, ever ready to suggest a way out of difficulties even to those who were or might be his business competitors, and he will be sadly missed by any who came within his influence. DR. JOHN NICOL.

IVES' REPLICA GRATINGS.

Photographers, the more scientific of them, at least, know the value of the Rowland diffraction gratings in spectroscopic work, but they know also that they are costly beyond the financial ability of all but the very few. Attempts have been made to duplicate them by many, but only with anything approaching success by Thorp, of Manchester, and even his were hardly suited for the more delicate phases of work. Celluloid, as will be seen from what follows, was the substance he employed, but it had defects, which made something else desirable; and now our energetic and persevering friend, Mr. Ives, has apparently hit on the right thing and the right way, producing replicas suited for even the most delicate work at less than a fifth of the cost of the originals.

The following appeared in the *Journal of the Transactions of the Franklin Institute*, before which he brought the replicas:

"With a Rowland diffraction grating, having 15,000 lines to the inch, and a Browning Student Spectroscope, every line in the solar spectrum, that was mapped with elaborate care by Kirchhoff with an elaborate and costly prismatic spectroscope, can be clearly

seen and the wave-lengths easily measured. The superior efficiency of the diffraction grating for spectrum analysis was first practically realized through the labors of Rowland in perfecting his machine for ruling such gratings at the Johns Hopkins University, and inaugurated a new era in spectroscopy work.

"Every great university, and many schools and colleges, are now equipped with Rowland gratings, but they are too costly to come into such general use as is desirable, and students are seldom allowed to use them for practice work, because they are so costly and so easily injured.

"The desirability of a method of reproducing such gratings at a comparatively low cost has long been recognized, and a partial solution of the problem was realized by Thorp, of Manchester, by making casts in celluloid, floating them off in water, and putting them down, face up, on plate glass. Such replicas are easily and cheaply made, and are good enough for some purposes, but the celluloid film always distorts sufficiently to mar the definition more or less, so that even the best of them define better over some limited portion of their area than

over all. They give the best results only when the rays entering the spectroscopic are practically parallel, as with direct sunlight without a condenser, and transmitted through a selected portion of the grating. Even then, owing to some scattering of the light, which manifests itself as a pale fringe, or halo, about the lines in bright-line spectra, the lines of the solar spectrum do not appear as black as with the original Rowland grating. Even if the celluloid film did not stretch, the manner of putting it down on glass would cause the inevitable slight unevenness of thickness not only by refraction to destroy the perfect parallelism of the emerging rays, but would also distort the plane of the diffracting surface, and the difference in refractive index of the celluloid and glass would produce disturbing reflections between the two surfaces of the replica. The defects introduced by any one of these sources of error may be slight, but that altogether they are of a very material importance the result always shows.

"I have had occasion to make considerable use of Thorp process grating replicas, and have made them myself very successfully, but the desirability, of realizing a more perfect method so impressed itself upon my mind that I have been carrying on systematic experiments for more than a year, with the result that I have worked out and reduced to successful practice a very remarkable improvement upon Thorp's method.

"This improvement is effected (1) by making the casts in a harder and less elastic material than celluloid; by (2) putting them face down upon the glass and forcing them into optical contact therewith, so that the perfect

plane of the diffracting surface is preserved, and (3) by sealing them up under another plane glass, with a balsam mixture having the same refractive index as the casting material, so that the perfect parallelism of the transmitted rays is insured, and at the same time the grating is protected from injury.

"There is a very small but even shrinkage of the casts, but after measuring up a large number, I found that it never amounted to more than four, or less than two in a thousand, and that by easily established conditions it would be kept very close to either of these figures. Under the conditions finally settled upon, the replicas come out uniformly, almost exactly 15,050 lines to the inch, and with so little distortion that an expert spectroscopist in one of our universities, working with a Hilger spectroscope, which utilized the entire aperture of the replica, declared that he could discover no difference in definition between it and an original quality A, Rowland grating. A photograph of the *E b* region of the solar spectrum made with one of them in a Browning Student Spectroscope shown with good definition every *b* group line that appears in the Angstrom and Kirchhoff maps, and more than fifty lines between *E* and *b*.

"The fact that these replicas are good enough for the most serious spectroscopic work, can be made at a comparatively low price, and may be handled freely by students in schools and colleges without risk of injury, leads me to think that the achievement is one of real importance."

The great convenience of the replicas I consider to be the fact that it is sealed, and therefore protected from the damage it might otherwise suffer

from the rough usage it is likely to receive at the hands of students. I have here also a Thorp replica supplied with the Colar Patch apparatus—an extremely good grating replica made from one of Sir W. Abney's originals. You will see that this, owing to its being unsealed, has got abraded. I have made a photograph of the spectrum with this replica, and also a

photograph with that supplied by Mr. Ives, both on the same negative. The definition appears to be exactly alike, there is, however, slightly less scattered light given with Mr. Ives' grating. I have here, also, an enlarged photograph of the spectrum of the electric arc burning strontium chloride, and it shows a magnificent series of sharp lines.

WHAT PLATES AND DEVELOPERS DO YOU USE?

BY VIA MEDIA.

My reply to the request of the editors for an article that should be practical, whatever else it might be, was to ask them what question was most frequently received for their "Answers" column, and their reply heads this, as I think I cannot do better, certainly can say nothing more practical than give some of my own experience and conclusions in connection with plates and developers.

When I first caught the photographic fever, some fifteen years ago, I have reason to be thankful that the hand camera was not so universally in favor, nor considered the right thing to put into the hands of a beginner, else I might yet have been blundering along snapping in season and out of season, satisfied with the "soot and white-wash" that characterizes nine-tenths of the work of all the hand camera carriers we see.

But even with one of the best instruction books it was far from plain sailing. That book, even now, is still one of the best, most complete and simplest, and, knowing what I now know, its author seems to have

omitted nothing; yet then, while it told much that I did not want, it rarely told what seemed to be most necessary.

By careful study and some little advice I at first, much to my surprise and more to my delight, produced several "fine" negatives. Fine they were to me and finer to my friends, until I ventured on their portraits, and their opinions suddenly changed, and I was obliged to confess, to myself, not without reason.

The fault could not be in camera or lens, for the dealer through whom they were got had made an excellent portrait of myself with them; nor was it likely to be in the plates, as they were of the brand he used—facts which shut me up to the developer which I had made up from the book, and it was silent on the modification that might be necessary for portraits. An obliging professional, who had not yet begun to blame the amateur for all professional ills, told me what developer he used, and gave me a few points on lighting, the latter and insufficient exposure being the rocks on which I struck, although I did not

then know it, and I did better, giving the change in the developer the credit.

For a time all went well, till I began to see the work of others that was better than mine, and then came discontent, but also determination. The apparatus being beyond question, and having confidence in my method of manipulation the fault must lie with the material, the plates or the developer or perhaps both, and nothing remained between success and me but the discovery of the best or most suitable of both; hence the desire to collar every successful photographer, and, if possible, learn which led him to success.

The natural result, of course, followed. It was good for the manufacturers and dealers, but bad for me. In the course of a year I verily believe that I had tried every plate made in the country and every developing formula that I could come across till my shelves were filled with plate boxes and bottles, and all the while my work was, even in my eyes, going back rather than advancing.

But it is a long road that has no turning. Light came to me at last, although just how or from whence I have never quite understood. Somewhere I came across the statement that "formula is indicative, not imperative," and it took hold of me like a catchword, and set to the comparing of the various mixtures employed by the most successful picture makers, when the result amply justified the plea. It was the same with the plates. In the query columns of the journals I had often seen it said that while the editors refused to recommend any particular plate, they declared that there was not a bad brand on the American market, but that each

had its own peculiarities, a study of which was essential to the getting their best out of them.

And just here was found the keynote of success. Not through egotism, but for encouragement I say it, that through the study of one particular plate and the use of the developer recommended by its makers I was soon able to produce photographs of a technique that pleased the most fastidious, and pictures that were acceptable to the judges of the most exclusive salons; and I feel fully warranted in saying that by such means the average beginner will always be able to accomplish the former however it may be with the latter.

Now, all this is merely the pre-amble; my letter of credit, or credentials, as it were, to give those that "want to know" confidence in the following advice:

The best plate to use is the plate that you are best acquainted with, and that acquaintance can be acquired only by sticking to it till you have. More important than the brand, *i. e.*, the particular maker, is perhaps the speed, and that depends, to a certain extent, at least, on the class or style of work you propose to do. But for all-round photography, and with "time" rather than "snap" exposure, a fast, but not the fastest, is to be preferred.

As a rule, although not without exceptions, the faster the plate the more difficult it is to work, or rather, perhaps, the more the care required in the working, and at the same time the finer and fuller the degree of gradation. For all ordinary purposes I should prefer a rapidity of about Wynne's F-78, and for special purposes his F-90, although personally, I

should probably employ the latter not more than once or twice in a year; as he who has studied the slower plate so as to understand its nature, properties and peculiarities, and through such knowledge can get out of it all that it is worth, will find it equal to almost every possible requirement.

Little need be said about the developers. While pyro still commands the attention of the great majority, especially amongst professional photographers, its supposed pre-eminence is probably due to their better acquaintance with it; but excellent as it is, there are various reasons that make some of the more modern reducers better suited for the amateur, especially such as their better keeping and non-staining qualities. To the beginner I would say, stick to the formula recommended by the maker of the plate, until, through study and experience, you have become acquainted with the nature and properties of developers generally, and more or less

understand the part played by each of the elements of which they are composed, by which time you will fully understand what is meant by formulæ being merely "indicative," and able to modify or construct to suit your own requirements.

The sum of the matter, then, is this: Supposing that you aim at good technique, that being, or should be, the basis of all good work. Select a particular brand or make of plate, fast but not the fastest, and stick to it. Develop with the solution recommended by the maker, taking no liberties with it except, perhaps, the addition of more or less additional water, to the extent, say, of half as much again, and your success is certain.

Just one more suggestion, or, rather strong recommendation, *back the plates*. The editor often urged this operation, and insisted on its advantage; and, with his permission, I shall do a little enforcing on the subject in the next number.

THE BRITISH PHOTOGRAPHERS' CONVENTION.

The British this year met in Dublin, and for the second time, the previous meeting having been in 1894, under the presidency of Sir Howard Grubb, that of this year being presided over by Dr. Joly, of three-color fame.

As usual, most of the week was occupied in sight-seeing, enjoying the almost limitless hospitality of the enthusiastic Irish photographers and their friends; exposing plates and films on the equally limitless picturesque scenery and other food for the camera, and the usual and delightful

intercourse with each other, although time was found for listening to two interesting papers, and to select Southampton for the 1906 meeting.

One paper was on "the use of extremely rapid plates," by T. Thorne Baker; the other, "The Latent Image," by Dr. Joly, the former mainly a compilation of much that is already scattered over the pages of the journals, the latter containing, as was to be expected, a good deal that was new, although hardly yet proved to be true. It will be found on another page.

WHAT ARE CORRECT VALUES AGAINST STRONG LIGHT?

BY ROLAND ROOD.

A theoretical knowledge of a fine art is usually of little value when it comes to the practice; but there are rare cases, where, without the theory the practice becomes difficult, even if not impossible. One such case is that of obtaining correct values in photographs taken against strong light. Such photographs usually look like anything but the effect sought and show the camera at its worst, at a moment when its judgment has run wild, and as a rule require considerable tinkering before they will render the required results. But unfortunately the knowledge requisite to do this tinkering and manipulating is not often born with us: a conscientious study of nature and a careful investigation of the methods used by painters in interpreting nature are necessary before much hope of successfully coping with this difficult problem can be entertained. I therefore propose to point out some of the principal laws which govern the case in question, and also to suggest the method of applying these same laws.

Go into the country late any clear sunny afternoon and place yourself at the foot of some low hill so that it lies between you and the sun. The hill should be not more than fifty feet high, and the top not more than one-eighth of a mile away, and there should be a few trees on top as well as at the foot (close to yourself). Wait until the right moment comes, namely, when the sun is within a short distance of the hill, and the whole makes a picture (a type of picture we are very

familiar with), and then look at it; look rapidly over the whole, the sun and all, two or three times, and note what you see. First, and above all, you will receive a most powerful impression of the sun (unless, indeed, it be seen through a mist or dust, which, however, is not the effect I am speaking of); and, second, you will observe that the whole hill-side is sunk in a bright blackness, or black lightness—it cannot be described otherwise—and this light blackness is inextricably confused and blurred, and what is more singular, seems to flutter and flicker. Try the experiment several times; observe that the sun is anything but round; its edges wobble in an extraordinary manner, and the more you look the more the edges wobble, until, finally, when you turn your eyes for relief to the hill-side you find that swimming in an indescribable black atmosphere of brilliant color.

Rest your eyes a little and try another experiment. Look at the hill a little below the sun, but not at the sun, and it will be dark and sombre and misty and light; it may flicker some, but not as much as in the first experiment. Then, still looking steadily at the hill, place the edge of your hat or hand so as to shade your eyes from the sun, and instantly will the hill lighten and the mist clear, the trees will fall into focus, and all will become logical; take your hand away and things again blacken and distort.

Rest your eyes and try once more. Look first toward the sun, a moment

only, and then at the hill, which will be dark as before, and rapidly lower your eyes until almost at your very feet, and fix them there, and watch what happens. The piece of ground at your feet, or it may be the trunk of a tree close by, will at first appear dark, but the longer you look at it the lighter and lighter will it become, until at length it will seem almost normal, and this without using any eye-shade. Raise your eyes to the sun and lower them again, and the same phenomenon of lightening and clearing occurs; but if you should fasten your eyes on the hill near the top you would find that no matter how long you kept them there it would always remain dark; in fact, the longer you kept them there and the nearer the sun approached the darker would it become.

Continue experimenting until after the sun has set and the strong light is gone. (Some eyes are too sensitive to bear the direct rays from the sun, and obtain better results with the after glow). Note one phenomenon:—the lower the sun goes (after once setting), and consequently the darker the evening becomes, the lighter will the hill appear, the top as well as the bottom; but after a while this lightening will suddenly cease, and the hill will darken with the night. Then is the time to go home and think about it. But do not rest content with the one afternoon of experiments; try again and again, each time selecting a new spot—even in town interesting results may be obtained.

Let us now analyze and try to determine to what causes these various phenomena are to be attributed. In the first place, when the eye is turned toward strong light the diaphragm

(iris) contracts. This, as we all know, is a provision of nature to save the retina from damage. But nature did not do as well as she might, for when the eye is subjected to direct rays from the sun, the iris fails to contract sufficiently, it becomes spasmodic in its action, one instant allowing more light to enter, the next less, and this fluctuation of light the eye naturally attributes to the sun itself. Also, the excess of light falling on the retina unduly excites and fatigues it; it loses its judgment and exaggerates, imagines that the sun wobbles and wiggles and occupies more degrees in the heavens than it really does. Further, the iris invariably accommodates itself (or tries to) to the strongest light, thus allowing far too little from the shadows to pass to permit much to be seen, so our hill-side looks dark and without definition. But more, the spasmodic dilation and contraction of the pupil due to the great strain continues even when not looking directly at the sun, thus causing the hill-side to appear to vibrate, etc. The fatigue the retina has undergone adds to this vibratory appearance, which is also increased by the phenomenon usually referred to as "the duration of the image of the retina." The duration of an image on the retina under ordinary circumstances lasts about the one-fifth part of a second, but with sunlight for from three to four and five seconds, the secondary effects often continuing thirty seconds to some minutes. The consequence of this is that the eye having, from looking at the sun, implanted its (the sun's) image on the retina, will, for a period, see echoes, distorted and fragmentary, of that sun wherever it looks, echoes, which may not be recog-

nized, but which help much to give that glittering, lustrous swimming look to the shadow on the hill.

There is still another cause at work which helps to complicate the appearance of the shadow, and that is *halation within the eye*. Now, there are four kinds of halation with which the photographer has to deal: That within the plate, the causes of which all camera workers are familiar with; that within the lense, and which is usually small in quantity and rarely to be considered; that outside of the camera due to dust and moisture in the air; and finally that within the eye itself, and which figures so largely in the present case. Halation within the eye occurs when strong light falls directly into the eye, thus illuminating the fluid therein; the light passing through the fluid falls on numerous suspended particles of matter, and being reflected therefrom renders the fluid self-luminous, which luminosity the retina unconsciously accepts as coming from *without* the eye, and it is this illumined fluid through which the dark hill is seen that produces on the mind the impression that the hill is light and dark at the same time.

Let us now consider our second experiment, that of shading the eyes from the sun. The hill, we will remember, instantly lightened and became normal in appearance when the strong light was cut out of the field of vision, the reasons for which are easy to understand after the above explanations, so we will pass on to the third experiment where we looked upon the whole scene, however, letting our eyes rest upon the near foreground some time. This experiment is, in truth, nothing more than a combination of the first and second; the

downward direction in which the eyes were inclined allowed little strong light to enter, so the pupils gradually distended and the foreground began to appear lighter and lighter.

Our fourth condition, that of the gradual lightening of the whole hillside after the sun had set is the same as the second; the cause of the violent contraction of the iris being gradually removed, more light was gradually admitted into the eye with a corresponding increase in luminosity in the shadows.

The above considerations naturally lead us to inquire how the painters have solved the problem in their pictures. Until pretty modern times the only sunsets that were attempted were like those of Claude Lorraine, which portray the landscapes as seen when the eyes are screened from the sun, and the sun is represented just as a fair lady, careful of her complexion, would like to behold it. Such pictures often have charms, but after having once seen the work of the impressionists, do not convince us. Turner, in his early work, frequently imagined these same conditions, but in later life superbly painted what I have called the third condition, namely, the lightening toward the foreground. Now, you will observe that in both Turner's and Claude's conceptions the time element plays a part; that is, Turner really combined two different moments into one; and, although this is certainly productive of most artistic results, yet it is never so effective or convincing as when the facts stated are those which are taking place all at one and the same time, or as nearly together as possible; in other words, when no time has been allowed for the eye or mind to assume a different atti-

tude. So we cannot be astonished that after all the impressionists, whose battle-cry is "The impression of one moment," should have made those canvases which are the most convincing, for it is they who have chosen as their *motif* the conditions I have enumerated in the first experiment, namely, when the whole was looked at rapidly and as a whole. However, the impressionists, when working in black and white, as in the illustrations in "Jugend," and the Japanese artists, and many of the clever French bill-poster artists, chose to make the distance very dark and the foreground a half-tone, and this for the obvious reason that where the color element is not present, or only crudely used, a too-large expanse of not greatly varied dark becomes monotonous. Therefore, possibly it might also be well for those photographers not skilled in technique to do the same, and gradate their sunsets from a dark distance to a light foreground.

But there is a method by which those photographers who have patience may obtain what I have called the impressionist's effect of a sunset, and the explanation of the method is, in part, the object of this paper. Proceed in this wise: Carefully choose your *motif* and the point of view from which you wish to take it, and arrange matters so that if necessary you can at any time go again to the scene and place your camera in identically the same spot and identically the same angle of elevation. If you are not possessed of the requisite surveyor's knowledge to do this, it may be best to select some suitable rest on top of a fence or fixed support where to place your camera. Then take several negatives

exposing for the sun. If these are successful proceed to enlarge and "wobble" the sun, either by stopping the back of the negative with tissue and drawing and painting, or with cotton batting, or by any other device you may be familiar with, or else by making a positive and using Farmer's Solution, etc. You will probably fail, but until you succeed in painting in a sun which beautifully and irregularly gradates without any evidence of edges into the sky, it would be useless to proceed further. This done, or even on the first day, take several negatives, exposing for the landscape, and screening the sun. The first should be sharp in focus, the second a little blurred, and another still more so. Take a dozen, some in slightly different directions (turning the camera on its base just a little), and at different angles of elevation. Then some morning go to the scene when the sunlight falls full upon it and photograph that too. The negatives should be exposed and developed to be rather "thin," not at all dense, particularly the one of the full sunlight. If all this is successfully accomplished you will have the material wherewith to make the picture. Print from the clearly focused negative, and so that you may clearly see what you are doing use some printing-out paper, and print long enough to obtain about half the strength you desire; then upon this print from one of the blurred negatives, and then from another, but so that the images *do not quite register*. The effect of the print on the paper should, after the second printing, be distressing to look at; the unconscious effort of the eye to bring the second printing into as clear focus, as the first is very annoying, but this is just what

we want. Continue. Use the negative of the full sunlight a little. Also dip one of the negatives in water to wet it, and melt and wiggle it in the sunlight so that the drawing becomes slightly distorted, and when dry print that in a little. Finally print in the sky and the sun. The result will be a dead failure, as you might have known in the beginning, but you will have begun to get an inkling of what you are after. Try the printing again, this time with fewer of the negatives and more judgment. If you have the opportunity study some of the impressionist's paintings, and observe that they obtain their effect by blurring, blending and softening into meaningless blotches, but now and then giving a touch, but only a touch, in clear focus. The greatest mistake the pictorial photographer makes, and

one into which the good painter never falls, is to be either out of focus, or in focus, but never both at the same time.

There are a few other moments in nature when light is strong and pictorial, notably when there is much moisture, or particularly dust in the air; then, on looking against the sun all the objects near it will seem to be eaten away or transparent. This is natural halation, and to imitate it, both halating as well as non-halating negatives combined with the other the devices spoken of may be used to advantage, the object being to represent that peculiar transparent and yet solid appearance of objects near the sun, for, as a rule, even when the halation is considerable these objects flicker and at moments little edges, here and there, come clearly into focus.

ON THE APPLICATION OF FARMER'S METHOD OF REDUCTION, BY WHICH THE SHADOWS ARE PRESERVED AND ONLY THE HIGH LIGHTS REDUCED.

By JOHN BARTLETT.

The objection hitherto to the so-called Farmer's Reducer has been to the tendency of the agent employed to destroy the detail of the shadow parts of the negative while acting upon the high lights; hence the Lumière Bros. introduced the Persulphate of Ammonia as an agent which would act harmoniously upon the film, that is, would attack the high lights (the dense deposits of the film) in preference to the thin portions. The Persulphate undoubtedly is a valuable chemical, and in the majority of cases will be found to work effectively; but frequently it is refractory, apparently not acting at all in the line of

reduction. Besides, it requires considerable manipulation to insure success and preservation of the negative from subsequent action. The writer has found that the ordinary Farmer's Solution, the mixture of Ferricyanide of Potassium and Hypo, may be made to act harmoniously upon the film, that is, to preserve the shadows while it reduces the high lights. Its harmonious action depends principally upon its constitution and mode of application.

Everyone is aware how much more readily a plate will reduce and indeed how much better is the relation of high lights to shadows when the plate

is reduced with the Farmer's Solution immediately on removal from the fixing bath after development, than it can be after being thoroughly washed free of the Hypo and dried. Indeed it is the practice of many practical workers to immediately reduce the plate after examination from the Hypo bath.

Now the reason why the plate (unwashed from Hypo) reduces more harmoniously as regards light and shade when placed in the Farmer's Reducer is on account of the Hypo on the film having the preponderance. So that if one wishes to secure shadows, the rational way to proceed is to constitute the reducer so that there may be considerable excess of Hypo over the Ferricyanide of Potassium (the Red Prussiate of Potash), for when the Ferricyanide of Potassium is in excess, the shadows invariably suffer. The method employed by the writer (who prefers the Farmer's Solution to the Persulphate) is to reduce immediately after fixing, when possible, making the film acid with acetic or citric and then to place merely in a 5 per cent. solution of Ferricyanide of Potassium—lifting the plate after a few minutes'

action to note the progress, for the action must not be allowed to continue too long or the shadows will pay for it.

When it is necessary to reduce a plate which has been thoroughly washed from Hypo, the plan is first of all to soak the film in a bath of weak acid, say a 10 per cent. solution for five or ten minutes, and then transfer to a bath of Hypo, for another five or ten minutes, and, finally, subject it to the action of the ordinary Farmer's Solution, that is, one constituted with twice or three times the amount of Hypo over the Ferricyanide solution and made acid by addition of acetic or citric acid sufficient to redden litmus paper.

Intense plates may thus be reduced as effectually as with Persulphate and with less trouble of manipulation.—*From Journal of the Photographic Society of Philadelphia.*

[So far as we know, no one ever thought of using Farmer's Solution with excess of the Cyanide Salt; the usual method being to add to the usual Hypo Solution sufficient of a solution of the Cyanide to make it a straw or pale sherry color.—Eds.]

REMOVING PYRO STAINS.

Various methods have been suggested for preventing or removing developer stains from the fingers, and the *Amateur Photographer* adds the following to the list: First make up a saturated solution of alum in boiling water and when cold pour off the liquid from the crystals. Into the liquid pour one-tenth of its volume of strong sulphuric acid, agitating it at the time. The liquid becomes very

hot, so it is advisable to mix in a strong vessel. When cooled, apply to the offending stains with a wad of cotton and immediately wash the fingers under the tap. Should the stains not disappear at once wash the fingers in warm water and apply the acid again. The solution is also useful for removing stains from negatives that are caused by prolonged development.

Those who will persist in calling Daguerre the "Father of Photography" should see "The Week in History" on page 484 of *The British Journal of Photography*, June 23, 1905, where it is recorded that on June 24, 1839, more than a month before Daguerre's process was made known, there was, in the Salles des commissaires priseurs in Paris, an exhibition of paper prints—prints from negatives, be it known, just as prints are from negatives now, while Daguerre's method gave only a positive that could not be duplicated, and although universally admired for a time was soon forgotten.

* * *

PHOTOTENGY, coined, I presume, by M. Couste, who gave, in the *Photographische Rundschau*, a method of making positives direct from camera exposures. It is practically a swelled gelatine method, and may be either blackened or color stained, but there is nothing in it worth the new name.

* * *

Medical men are not always sufficiently careful when they write. At an inquest recently held in London, and reported in *The British Journal of Photography*, on a girl who had swallowed about forty grains of potassium bichromate the "doctor" declared that instead of forty, one-fifth of a grain was sufficient to cause death.

The North of England photogra-

phers know how to attract visitors to their exhibitions, as the following will show. The method is good enough to be adopted on this side:

With the true business acumen and strenuous effort which the world has rightly come to regard as characteristic of the great county of Yorkshire, the arrangements for the exhibition have been carried on, and are gradually making a conception of the denouement possible.

The lavish manner in which printed matter, much of it of a very ingenious character, has been distributed, marks Mr. Issott, the secretary, as an ideal man for what our American friends call a publicity department.

Arrangements are being made for the running of excursions to Leeds during the period of the exhibition. Posters of special designs, in twelve, sixteen, and twenty-sheets, will be posted in Leeds and other Yorkshire towns, railway stations, etc., and litho window bills for dealers, club rooms, and other suitable places have been contracted for.

Every thousandth person who passes the turnstile will be allowed to select from the walls of the exhibition a picture value £1 1s., for which the executive will pay. Admission to the Gallery will be the nimble sixpence, or by season ticket for 2s. 6d., and the exhibition will be open daily from 10 a. m. to 9.30 p. m. Lantern lectures

and chamber concerts will be given at intervals.

* * *

Who would not live in Ireland, especially lovers of the picturesque with not too-well filled purses? Hear what railroads running through the most charming scenery offer: Seven days' tour, including rail, driving, and hotel expenses for thirty-four shillings (\$8.16), cheaper, a good deal, than some of us can live at home. It does, as *The Photographic News* says, seem impossible, although nevertheless true.

* * *

"Would Photography of To-Day Exist if the Daguerreotype had never been known?" so asks a writer in *Wilson's*, and never, surely, was there such an evident proof of being at one's wits end for a subject on which to spin out an article. Surely everybody that knows anything at all about the Daguerreotype knows that the difference between it and the photography of Talbot is as great as between chalk and cheese; and everybody that knows also anything about the Talbotype knows that it is merely the photography of to-day modified, while the Daguerreotype is as dead, and much more forgotten than Cæsar.

The said writer occupies six or eight columns in coming to the same conclusion, or rather helping his readers to do so, as he hardly reaches it himself, although he manages to make several mistakes in the effort. For example, he gives Morgan the credit of "inventing bromide paper," while it is well known that the honor belongs to Swan, who, long before 1831, brought it before the Edinburgh Photographic Society, some of the specimens then shown being still in my

possession. A little further on he ventures on the slippery ground of theory and discovers that in the Daguerreotype the sensitive surface, the iodide and bromide of silver, was formed by the action of the elements in their *nascent* state, instead of, as I had supposed everyone knew, in their normal, not *nascent*, state of vapor. In touching theory it is well to remember that *ne sutor ultra crepidam*.

In connection with this the following, which we clip from *The British Journal of Photography*, may interest our readers:

"Perhaps it is not generally known that the first authenticated piece of photography which Fox Talbot did is still in a very fair state of preservation. It was made in August, 1835, and therefore is at least seventy years old at the present time. Mr. C. H. Talbot has the original in his possession. It is the image of a latticed window in Lacock Abbey, and is mounted on a piece of paper on which Talbot had written:

(With the camera obscura.)

Latticed Window.

August, 1835.

When first made the squares of glass about 200 in number could be counted, with the aid of a lens.

Mr. C. H. Talbot has stated that they can still be so counted, so that the negative—which is what the relic is—is not very much different from what it was when Talbot made it. The window can be identified in Lacock Abbey, and the claims of Talbot in his first paper—viz., that he was bringing forward the results of work done several years previously — can thus be substantiated."

NOTES.

THE BISSELL COLLEGE OF PHOTO-ENGRAVING. — We have frequently spoken of the progress of this institution, started at first as a branch of the Illinois College of Photography, and as filling a much-felt want; and now we learn from *The Effingham Republican* that so far beyond all expectation has been its success that it requires a college building of its own. This Mayor Bissell, its principal, has found in the Austin College a building judging from the cut in the paper, more like a cathedral and worth over \$30,000, and which, with its chemical and physical laboratories and full equipment, will be opened in September. The following extract from the notice in *The Republican* will interest prospective students:

"Bissell College of Photo-Engraving enjoys the distinction of being the only institution of the kind in the world. It stands pre-eminent, as it is endorsed by the International Association of Photo-Engravers. In their last annual convention they endorsed the school, and appointed an advisory board from its members to conduct the school.

"Photo-engraving affords a profitable vocation for the young man. In the United States there are only 3,000, and not a man out of employment. The salary is good, and the demand for engravers has never been met. As an illustration, one young man, twenty years old, is now making \$100 a month

after taking a course of seven months. Another boy, aged eighteen, Homer Krone, made \$110 last month, and had only partially finished his course. The demand for photo-engravers is so great that President Bissell has no hesitancy in guaranteeing positions.

"President Bissell is already preparing to increase his facilities by installing a larger electric light plant. The new quarters will also have very fine chemical and physical laboratories.

"The tuition fee for the entire course is only \$150, and after all is considered a young man can enter no profession that will pay so well for so small an amount in preparation."

* * *

AN OVERLOOKED DANGER. — A British maker of plates and paper has called attention to a hitherto unsuspected source of danger to both in the now popular sulphide toning of bromide prints. It is said that pure sodium sulphide is free from smell, but the *British Journal of Photography* says it has never seen a sample that was so, and even although it were, sulphides are searching, and certainly show themselves in toning, so that it should never be done where either plates or paper are kept, as doubtless many of the complaints against both might have been traced to the influence of the ill-smelling compound. Sulphide toning should be carried on in the open air.

DEVELOPMENT OF FILMS.

In *Apollo* it is pointed out that by using elastic bands to hold the edges

to a glass plate, a piece of roll film may be developed as easily as a plate.

A "CAMERA SENSE."

The *Lancet* has been pointing out there is such a thing as a "traffic sense"—the sense by which a man, without consciously using his eyes or ears, manages to thread his way with perfect ease through the most bewildering city traffic. Is there such a thing, one wonders, as a camera sense? It would seem to be so from the experience of a photographer who recently "took" Mr. T. A. Edison. Mr. Edison, be it remembered, is deaf, and when he sat for his photograph, his eyes were dropped looking at his hands. It was a time exposure and the instant the shutter of the camera closed with a click, he looked up and exclaimed, "Over-exposed." His attorney shouted to him, "Did you hear that click?" "Eh?" "How did you know that he had finished that exposure?" "Oh, I had an intuition."

Taking the *Lancet's* suggestion of a "traffic sense" and our contemporary's query as to a "camera sense" as a text for a few observations from our own experience on an *exposure* sense regarding which we have not the shade of a doubt.

By an "exposure sense" we mean the ability to make practically correct exposures under almost all conditions and equally varied circumstances, and generally without the knowledge or unconscious of any data on which such exposures are founded; the ability or faculty coming as if it were a sixth sense as reliable although less understood than any of the more generally acknowledged other five. The claim for the possession of this sense has been made again and again, some-

times by its possessor and sometimes by those who had only seen its results, and, like most things that seem akin to the occult, was "by some believed and some misdoubted;" and, as whatever else may contribute to it, long experience, and careful observation are a *sine qua non* it never became general, and in these days of snap exposures and reliable exposure meters it will soon become a lost art or forgotten faculty.

Having possessed and practised this "sense" through the greater half of the wet collodion period, continued it through all the various dry-plate modifications, including the present gelatino-bromide from "as quick as collodion" to something almost deserving the oft-misused term "instantaneous," and continuing to use it still whenever we employ the camera on the stand, which is almost always, we want to put on record just how it is done before it is altogether forgotten.

"Just how we do it," however, is rather misleading, as we do not know *how* in the true sense of that word. But the following is the method, and the result is, practically at least, never failing, as is proved by the development of the negatives, and still more strongly by the fact that again and again we have, to satisfy a doubting Thomas, gone through the operation while he has made the test with the Wynne's Meter, and *our estimates were always practically alike*, mine being about twenty-five per cent. in excess of that of the meter, which I always give in using it.

As already said, we cannot tell how

it is done, but here follows exactly what we do. Having selected the subject and view point, which means having placed the camera finally with the composition satisfactory, we spend a pipe, or a cigar, if a liberal friend happens to be handy, studying it. Not for alteration, but how it will come out, and how we should like it to come. Where the most telling shadow and influential light; getting acquainted with it, in fact, and thinking over how by exposure, development, or printing, either or all we can force it to be as *we* want it. Then the pipe or cigar being finished, we take another look at it on the focusing screen; place the plate holder in position, cover the camera with the focusing cloth and withdraw the slide. Up to this time no thought has been given to exposure, nor, indeed, has it crossed our mind more than anything else that has no part in photography. We know from the nature of the subject, and our object in photographing it what stop is in the lenses, F-22 if topographical or a record of fact, and F-8 or F-11 if pictorial, but even when deciding on the stop there is no thought of the exposure. But now, now only, and not till now, with hand on cap, or time bulb in hand, our exposures are "time"

99 times in 100. We *feel* what it should be. Probably *feel* does not quite convey the right sensation, but we do not think of a better. The time, and it may be, and often does, vary from half a second to many seconds; but it comes into the mind like a flash. There is no hesitation, no doubting or thinking of more than one time, and as said already, it is found correct 99 times in 100.

So frequently had we trusted to this inspiration as it was sometimes called for want of a more suitable term, and so rarely been mistaken that we hugged it as one of our valuable possessions, that when the exposure meter first came across the water we threw cold water on it as a crutch, the leaning on which would prevent photographers from ever acquiring it. But, thanks to Wynne and Watkins, we now take a more sensible course, whatever may be the true explanation of the "exposure sense," it is clear that it cannot be acquired without long practice and much careful observation; taking time, and probably wasting material, both of which that might be better employed; and, therefore, we now, highly as we prize the ability, say, Throw in your lot with those who trust to the exposure meter.

COLORPRINTE.

We have now had an opportunity of experimenting with this recently introduced printing paper, and may say at once that it will, to many, give a new charm to their photography. It will be noticed that the dealers wisely do not claim that the paper gives either

the so-called "colors of nature" or natural colors," but *prints in colors*; and in landscapes generally and for the generality of landscape workers that it is all that is desired. Not the colors of the subject photographed but the degrees of density in the negative discover, or rather uncover the colors on

the paper; but it is surprising how near they often come to those in the subject; so near that in every one of our experiments the colors were just as they might have been and never such as they could not have been expected to be. Very pretty and attractive pictures; and, as we have already said, likely to give a new charm and a new impetus to photography to a certain but very large class of photographers.

But the method is not quite so new as some of us may be led to believe, as if they will refer to page 234 of

our 1898 volume, the May number, they will find that something of the kind had been patented in France and Britain by M. V. Vaucamps, and that he had been forestalled for a couple of years at least by Mr. J. D. Long, a photographer in Sanborn, Ia. Not, however, to he who invents but to he who practically applies belongs the honor and the credit and while recognizing Mr. Long as so far as we know, the original inventor, the credit for a commercially practicable color printing paper belongs to the author or authors of Colorprinte.

ONE-PLATE COLOR PHOTOGRAPHY.

Herr Schinzel describes, in the current number of the *Photographisches Wochenblatt*, the following process for producing photographs in natural colors, which, he states, differs from all previous processes, in that separate component pictures are not required, but that with one plate a single exposure is made, and on this one plate the multi-colored image is produced.

The plate is coated with a number of colored gelatino-bromide films, which are separated by films of plain gelatine. The individual films are so colored that a part of the incident light is absorbed in each film and by the addition of suitable sensitizers the absorption of the colored rays is made as perfect as possible. For example, in using three films, the top one will be colored yellow or orange, and obviously be sensitized for the blue violet rays; the middle one will be colored blue or blue-green, and be sensitized for reddish orange; whilst the bottom

one will be colored red and sensitized for yellowish green. If a plate thus prepared is exposed on any subject, a part of the rays will be absorbed by each film, and by development and fixing the corresponding component parts of the picture will be produced.

The development of the polychromatic picture is founded on the catalytic property of metallic silver. If a developed and fixed plate is immersed in a 2 per cent. aqueous solution of hydrogen peroxide, this will be decomposed where there is metallic silver, and oxygen set free. If, now, such dyes have been chosen for coloring the gelatino-bromide films, that they, by oxidation, are easily converted into colorless compounds, they will be bleached out where there is metallic silver. It is easy to conceive that after the removal of the silver, colored pictures will be obtained, which will be not complimentary to, but according, to the colors of Nature.

Moreover, it is not essential that the oxidation products of the dyes should be colorless. It will be quite enough if the power of the pigments to stain the gelatine is destroyed by the oxidation and that they become soluble in water. Hence it would be possible to use comparatively stable dyes, so that the colored images would bleach with difficulty in sun or daylight.

The polychrome image can be printed from the plate on to a sheet of white paper, prepared in the same way, but the picture will appear less brilliant than when observed as a transparency.

As regards the practical working of the process, it should be noted that the gelatino-bromide of silver films must be "wasserecht" stained—that is to say, that the dyes must not be soluble in water—and that they must not be affected by development and fixation, or, if in this case, they must be reformed before the treatment with the peroxide. At the same time, any sensitizers that may be used which will not bleach, and whose color does not agree with that of the films, can be removed.

The films of plain gelatine between the individual colored films have the effect of preventing the action of the nascent oxygen developed in one film from acting on the others, and of confining the gas as far as possible to the requisite colored film. For this last reason the top film is also coated with a transparent gelatine film.

It is advisable, before treating the gelatine with peroxide, to harden it, but not so that the diffusion of the peroxide solution is rendered too difficult. It is well known that peroxide

has the property of dissolving metallic silver, and that the oxidation would be brought to a premature stop. This advantage is obviated by the addition of a small quantity of soda to the peroxide solution. As, however, many dyes are altered by the alkalinity of this solution, it is necessary to regenerate them by immersion in an acid solution.

Briefly, the essential advantages of this process are that only one exposure is made, and the printable and more or less true-to-nature picture is produced on the negative plate. The preparation of the pictures is extremely simple, no more solutions are necessary than in the production of pictures on bromide paper—namely, developer, fixing, and instead of the toning bath the peroxide solution—for if the latter, when the oxidation process has continued long enough, is acidified, the solution of the silver is effected.

This method represents, therefore, a direct process of color photography suitable for instantaneous work, and one in which the printable image is produced on the original plate in body colors.

We learn that this process is patented in all civilized countries, and that further details are promised, which, we are sure, will be anxiously awaited. Nevertheless, it is well not to be over-sanguine in regard to the possibilities of such a process in practice. It seems that a composite plate such as that which Herr Schinzel proposes using is necessarily very slow, and instantaneous exposures will be possible only under the very best conditions.—*British Journal of Photography*.

INDIVIDUALISM.

By W. WALLINGTON.

These are days of competition, when the position of the very foremost professionals is assailed. Men who ten or twenty years ago considered themselves above competition are now compelled to compete in the race for position. This competition has been the making of some photographers, others, alas! have fallen by the way.

THE BANE OF CHEAPNESS.

Workers who a decade ago were considered clever, can to-day only rank as good ordinary photographers; they can turn out good ordinary work, but so can thousands of others, with the difference that the others who have not heavy expenses and large establishments to keep up can do their work at cheaper rates. In these days of cheapness, if a patron can get work of an equal quality at a lower rate, he will not pay a bigger price for the pleasure of seeing some well-known photographer's name at the foot of his print, and thus these same workers who ten years ago did good ordinary work and made it pay, are badly off to-day, whilst those who go in for a specialty and do work out of the common are sure of retaining their old patrons and adding considerably to them as the years roll on.

THE DIFFERENCE IN PHOTOGRAPHS.

The "middle" class photographer has improved his work by leaps and bounds, and there is no longer the wide chasm between their work and that of the front-rank man. They can both take and finish photographs with

skill, but the one stamps his work with individualism, and the other turns out good ordinary work. The labor is nearly the same in each case—the one is little more costly to work than the other—but the difference in the payment is a wider difference than of old. Take the work of the front-rank man (to name one or two when so many are worthy of mention would be unfair); you can tell at a glance who the artist is. "Oh, that is So-and-so's style," you exclaim; but do you stop to think why you recognize it as such? You did not require to look at the name at the foot to trace the artist; his work tells you. It is, in fact, individualistic. The same mannerisms run through the whole of his work; a certain pose, lighting, style of background or of mounting, color of print, or perhaps a bit of each. No matter what it is, it is something out of the ordinary, and that is the whole secret.

There was never a time in the history of photography when good work was more in demand, for the public have been educated up to a higher standard than would have satisfied them ten years ago. They don't want the common or garden photograph, but an artistic effort. The old album, with its places for C. D. V. and cabinets, has been carefully stored in the lumber-room for the benefit of future generations, who will no doubt derive considerable amusement from it. There is no royal road to individualism, though it can be obtained by anyone possessing artistic feeling if they

are willing to study, and it is a study that will repay the professional photographer a hundredfold. In fact, I go so far as to say that no professional photographer can get on without giving this matter considerable thought.

THE STUDY OF GREAT PORTRAITS.

It would be foolish to point the defect without giving the means a remedy. This will not be a difficult task. My advice is to go to the nearest art gallery and study the old masters; take one of these for your model, and see as many of his works as possible. They will all vary in some particular, but the same individualism will run through all. I go so far as to recommend you to have your backgrounds painted in a similar style to those used by the artist. You may only have everyday sitters to photograph, but that need not deter you from the work, for you must remember that these same subjects were everyday people when the portraits were painted. Follow your artist closely for a little while, and you will then get the style of work, after which you will be able to put your own individualism into your work, thus making your work after the school of Gainsborough, Vandyke, Reynolds, etc., but from a photographic standpoint of your own.

A high-class photographer who has made a moderate fortune out of the work gave me the following information in reply to my request as to how he had made his business so successful in so few years, in face of the bad times and great competition. "I made up my mind," said he, "that there was no room for a photographer who could only turn out ordinary work at ordinary prices, so I decided to do something

out of the common, and charge my own price. But what should I do and how should I do it? Happy thought! why not go to London and see how the old masters worked? I spent a week in the National Portrait Gallery, the National Art Gallery, the Academy, Tate, etc. This was my first step upwards, and since that week I have spent many happy hours in the same places, and have always returned home with new ideas and higher aspirations. Considering I worked my business up from midgits at 4s. 6d. per dozen to its present position, I consider my holidays in the London art galleries my cheapest outings and greatest help."

I can only recommend my readers to give this advice a trial, and then I feel sure we shall hear less of bad trade and of that very useful and necessary competition that is so much to the front at present. What is wanted is better work. There is plenty of room on top, but a man will never get there if he keeps in that same old rut of ten years ago. That particular rut leads down hill, and it is time to get out of it.

I will summarize my remarks with a few hints of what to do and what not to do.

BACKGROUNDS.

The ordinary interior and exterior are dead. They have done their duty; let them rest in peace. Go in for a special background painted to your own ideas, and use as few studio accessories as possible. Change the whole of your backgrounds as often as means will allow. Your clients do not want photographs of balustrades, steps, or pedestals, but of themselves. On the other hand, graduated back-

grounds may be good for vignettes, but do not use them for everything. If your pocket will not run to a specially painted background, try a plain white or black one with a continuous foreground; but have something out of the ordinary.

Lighting must follow the background. If you are having your background painted after Gainsborough, follow his lighting also. I have seen work by front-rank men with the sitter beautifully lighted, but in absolute contradiction to the background, thus spoiling the whole effect.

THE PRINTING PROCESS.

Do not use the easiest because it is the easiest, but use the one that shows off your work to the best advantage. Every good photographer should be able to make a first-class print in sepia and black platinotype and in carbon. Do not leave yourself too much in the hands of your printer. Not only should you be able to tell when a print is well done, but you should be able to show your printer how to do it. The printing-room is just as important as the studio, but how many photographers give it the attention it should have? There is as much money made in the printing-room as in the studio, but through want of attention

many a photographer is ruined by the printer's bad work.

MOUNTING.

Carry your individualism to your mount. Again try to get something out of the ordinary. Your mount maker will only be too pleased to carry out any idea you may have. If you do not wish to go to the expense of a special mount, make your print on thick paper, mask out a margin, and put in a plate mark by means of a piece of zinc and a letter press. You have then a high-class mount ready made.

I do not expect that by following my advice you will jump into the forefront of the photographic profession and increase your business by leaps and bounds. But by showing better work than the ordinary man your showcases will attract more attention, and business will follow. It may come slowly, but it will come; of that I am certain—and with better prices. Do not grumble about competition, but advance the quality of your work, and, once more, remember there is plenty of room on top for the man who can do something out of the ordinary, or, in other words, for the man who can stamp his work with individualism. — *British Journal of Photography*.

SOAP IN THE DEVELOPER.

The olive oil and soda soap, ordinarily known in this country as Castile soap, is the type of a pure hard soap. Herr Franz Hofbauer (*Photographische Mitteilungen* No. 15, 1905, p. 234) finds that the use of this soap in the pyrogallic developer offers an excellent security against fog from

the presence of excess of soda or ammonia. From two to three grammes of the soap having been rubbed down in a mortar with water, the solution is made up to 150 cubic centimetres. This solution is used instead of water in compounding the developer.

THE LATENT IMAGE.

Read by Dr. Joly at a meeting of the British Convention in Dublin, July 10, 1905.

My inclination has led me, in spite of a lively dread of incurring a charge of presumption, to address you principally on that profound and most subtle question—the nature and mode of formation of the photographic image. I am impelled to do so not only because the subject is full of fascination and hopefulness, but because the wide topics of photographic methods or photographic applications would be quite unfittingly handled by the president you have chosen.

I have already had the honor upon two occasions of bringing ideas on this subject before the Photographic Society of Ireland, and the photographic society has, with much patience and fortitude, listened to my views, or my statement of the views of others. I do not propose to try your patience in the same relentless manner. You will notice that the committee, rendered wise by past experience, has wisely limited the time at my disposal. I will therefore make my remarks brief.

I would first draw your attention to Sir James Dewar's remarkable result that the photographic plate retains considerable power of forming the latent image at temperatures approaching the absolute zero. A result which, as I submit, compels us to regard the fundamental effects progressing in the film under the stimulus of light undulations as other than those of a purely chemical nature. But few, if any, instances of chemical combination or decomposition are known at so low a temperature. Purely chemical actions cease, indeed, at far higher temperatures; fluorine being among the few bodies which still show chemical activity at the comparatively elevated temperature of -180 deg. C. In short, this result of Sir James Dewar's suggests that we must seek for the foundations of photographic action in some physical or intra-atomic effect, which, as in the case of radio-activity, or fluorescence, is not restricted to intervals of temperature over which active molecular vis viva pre-

vails. It compels us to regard with doubt the role of oxidation or other chemical action as essential, but rather points to the view that such effects must be secondary or subsidiary. We feel, in a word, that we must turn for guidance to some purely photo-physical effect.

Here, in the first place, we naturally recall the views of Dr. Bose. This physicist would refer the formation of the image to a strain of the bromide of silver molecule under the electric force in the light wave, converting it into what might be regarded as an allotropic modification of the normal bromide which subsequently responds specially to the attack of the developer. The function of the sensitizer, according to this view, is to retard the recovery from strain. Bose obtained many suggestive parallels between the strain phenomena he was able to observe in silver and other substances under electro-magnetic radiation, and the behavior of the photographic plate when subjected to long continued exposure to light.

This theory, whatever it may have to recommend it, can hardly be regarded as offering a fundamental explanation. In the first place, we are left in the dark as to what the strain may be. It may mean many and various things. We know nothing as to the inner mechanism of its effects upon subsequent chemical actions: or, at least, we cannot correlate it with what is known of the physics of chemical activity. Finally, as will be seen later, it is hardly adequate to account for the varying degrees of stability which may apparently characterize the latent image. Still, there is much in Dr. Bose's work deserving of careful consideration. He has by no means exhausted the line of investigation he has originated.

Another theory has doubtless been in the minds of many. I have said we must seek guidance in some photo-physical phenomenon. There is one such which pre-eminently connects light and chem-

ical phenomena through the intermediary of the effects of the former upon a component part of the atom. I refer to the phenomena of photo-electricity. It was ascertained by Hertz and his immediate successors that light has a remarkable power of discharging negative electrification from the surface of bodies—especially from certain substances. For long no explanation of the cause of this appeared. But the electron—the ubiquitous electron—is now known with considerable certainty to be responsible. The effect of the electric force in the light-wave is to direct or assist the electrons contained in the substance to escape from the surface of the body. Each electron carries away a very small charge of negative electrification. If, then, a body is originally charged negatively, it will be gradually discharged by this convective process. If it is not charged to start with, the electrons will still be liberated at the surface of the body, and this will acquire a positive charge. If the body is positively charged at first we cannot discharge it by illumination.

It would be superfluous for me to speak here of the nature of electrons, or of the various modes in which their presence may be detected. Suffice it to say, in further connection with the Hertz effect, that when projected among gaseous molecules, the electron soon attaches itself to one of these. In other words, it ionizes a molecule of the gas, or confers its electric charge upon it. The gaseous molecule may even be itself disrupted by impact of the electron, if this is moving fast enough, and left bereft of an electron. We must note here that such ionization must be regarded as conferring potential chemical properties upon the molecules of the gas and upon the substance whence the electrons are derived. Similar ionization under electric forces enters, as we now believe, into all the chemical effects progressing in the galvanic cell, and, indeed, generally in ionized solutants.

I have here a simple experiment which will at once illustrate the principles I wish to remind you of. A clean aluminium plate carefully insulated by a

sulphur support, is faced by a sheet of copper-wire gauze placed a couple of centimetres away from it. The gauze is maintained at a high positive potential by this dry pile. A sensitive gold leaf electroscope is attached to the aluminium plate, and its image thrown upon the screen. I now turn the light from this arc lamp upon the wire gauze, through which it in part passes and shines upon the aluminium plate. The electroscope at once charges up rapidly. There is a liberation of negative electrons at the surface of the aluminium; these, under the attraction of the positive body, are rapidly removed as ions, and the electroscope charges up positively.

Again, if I simply electrify negatively this aluminium plate, so that the leaves of the attached electroscope diverge widely, and now expose it to the rays of the arc lamp, the charge, as you see, is very rapidly dissipated. With positive electrification of the aluminium there is no effect attendant on the illumination.

Thus from the work of Hertz and his successors we know that light—and more generally what we call actinic light—is an effective means of freeing the electron from certain substances. In short, our photographic agent—light—has the power of evoking from certain substances the electron which is so potent a factor in most, if not all, chemical effects. I have not time here to refer to the work of Elster and Geitel, whereby they have shown that this action is to be traced to the electric force in the light wave, but must turn to the probable bearing of this phenomenon on the familiar facts of photography. I assume that the experiment I have shown you is the most fundamental photographic experiment which it is now in our power to make.

We must first ask from what substances can light liberate the electron. There are many; metals, as well as non-metals and liquids. It is a very general phenomenon, and must operate widely throughout Nature. But what chiefly concerns the present consideration is the fact that the haloid salts of silver are vigorously photo-electric, and possess, according to Schmidt, an activity in the

descending order: bromide, chloride, iodide. This is, in other words, their order of activity as ionizers (under the proper conditions) when exposed to ultra-violet light. Photographers will recognize that this is also the order of their photographic sensitiveness.

Another class of bodies also concerns our subject—the special sensitizers used by the photographer to modify the spectral distribution of sensibility of the haloid salts, e. g., eosine, fuchsin, cyanine. These again are electron-producers under light-stimulus. Now it has been shown by Stoletow, Hallwachs and Elster and Geitel that there is an intimate connection between photo-electric activity and the absorption of light by the substance; and, indeed, that the particular wave lengths absorbed by the substance are those which are effective in liberating the electrons. Thus we have strong reason for believing that the vigorous photo-electric activity displayed by the special sensitizers must be dependent upon their color absorption. You will recognize that this is just the connection between their photographic effects and their behavior towards light.

There is yet another suggestive parallel. I referred to the observation of Sir James Dewar as to the continued sensitiveness of the photographic film at the lowest attained extremes of temperature, and drew the inference that the fundamental photographic action must be of intra-atomic nature and not dependent upon the vis viva of the molecule or atom. In then seeking the origin of photographic action in photo-electric phenomena we naturally ask: Are these latter phenomena also traceable down to low temperatures? If they are we are entitled to look upon this fact as a qualifying characteristic, or as another link in the chain of evidence connecting photographic with photo-electric activity.

I have quite recently, with the aid of liquid air kindly supplied to me by Mr. Moss, and made in the laboratory of this society, tested the photo-sensibility of aluminium, and also of silver bromide, down to temperatures approaching that of the liquid air. The mode of observa-

tion is essentially that of Schmidt—what he terms his static method. The substance undergoing observation is, however, contained at the bottom of a thin copper tube, which is immersed to a depth of about 10 cm. in liquid air. The tube is closed above by a paraffin stopper which carries a thin quartz window as well as the sulphur tubes through which the connections pass. The air within is very carefully dried by phosphorous pentoxide before the experiment. It was found that a vigorous photo-electric effect continued in the case of the clean aluminium. In the case of the silver bromide a distinct photo-electric effect was still observed. I have not had leisure to make, as yet, any trustworthy estimate of the percentage effect at this temperature in the case of either substance. Nor have I determined the temperature accurately. The latter may be taken roughly at about—150 deg. C. Sir James Dewar's actual measurements afforded 20 per cent. of the normal photographic effect at—180 C. and 10 per cent. at the temperature of—252.5 C.

With this much to go upon, and the additional fact that the electronic discharge—as from the X-ray tube or from radium—generates the latent image, I think we are fully entitled to suggest as a legitimate lead to experiment the hypothesis that the beginnings of photographic action involve an electronic discharge from the light-sensitive molecule. In other words, that the latent image is built up of ionized atoms, or molecules, the result of the photo-electric effect upon the illuminated silver haloid, and upon these ionized atoms the chemical effects of the developer are subsequently directed. It may be that the liberated electrons ionize molecules not directly affected, or it may be that in their liberation they disrupt complex molecules built up in the ripening of the emulsion. With the amount we have to go upon we cannot venture to particularize. It will be said that such an action must be in part of the nature of a chemical effect. This must be admitted, and in so far as the rearrangement of molecular fabrics is involved the result will doubtless be controlled by tem-

perature conditions. The facts observed by Sir James Dewar support this. But there is involved a fundamental process—the liberation of the electron by the electric force in the light-wave, which is a physical effect, and which, upon the hypothesis of its reality as a factor in forming the latent image, appears to completely explain the outstanding photographic sensitiveness of the film at temperatures far below those at which chemical actions in general cease.

Again, we assume that the electron-producing power of the special sensitizer or dye for the particular ray it absorbs is responsible, or responsible in part, for the special sensitiveness it confers upon the film. Sir Wm. Abney has shown that these sensitizers are active, even if laid on as a varnish on the sensitive surface, and are removed before development. It must be remembered that at fairly high temperatures these sensitizers lose their influence on the film. (See paper by me read before the convention in 1894.)

It appears to me that on these views the curious phenomenon of recurrent reversals does not present a problem hopeless of explanation; for the process of photo-ionization constituting the latent image, where the ion is probably not immediately neutralized by chemical combination, presents features akin to the charging of a capacity—say a Leyden jar. There may be a rising potential between the groups of ions till ultimately a point is attained when there is a spontaneous neutralization. I may observe that the phenomena of reversal appear to indicate that the latent change upon the silver bromide molecule, whatever be its nature, is one of gradually increasing intensity, and finally attains a maximum when a return to the original condition occurs. The maximum is the point of most intense developable image. It is probable that the sensitizer—in this case the gelatine in which the bromide of silver is immersed—plays a part in the conditions of stability which are involved.

Of great interest in all our considera-

tions and theories is the recent work of Professor Woods on photographic reversal. The result of this work is—as I take it—to show that the stability of the latent image may be very various, according to the mode of its formation. Thus it appears that the sort of latent effect which is produced by pressure or friction is the least stable of any. This may be reversed or wiped out by the application of any other known form of photographic stimulus. Thus an exposure of X-rays will obliterate it, or a very brief exposure to light. The latent image arising from X-rays is next in order of increasing stability. Light-action will remove this. Third in order is a very brief light-shock, or sudden flash. This cannot be reversed by any of the foregoing modes of stimulation, but a long-continued undulatory stimulus, as from a lamp, will reverse it. Last and most stable of all is the gradually built up configuration due to long-continued light-exposure. This can only be reversed by overdoing it, according to the known facts of recurrent reversal. Professor Woods takes occasion to remark that these phenomena are in bad agreement with the strain theory of Dr. Bose. We have, in fact, but the one resource—the allotropic modification of the haloid—whereby to explain all these orders of stability. It appears to me that the elasticity of the electronic theory is greater. The state of the ionized system may be very various according as it arises from continued rhythmic effects or from unorganized shocks. The ionization due to X-rays or to friction will probably be quite unorganized; that due to light more or less stable according to the gradual and gentle nature of the forces at work. I think we are entitled to conclude that on the whole there is nothing in Professor Woods' beautiful experiments opposed to the photo-electric origin of photographic effects, but that they rather fall in with what might be anticipated.

When we look for further support to the views I have laid before you we are confronted with many difficulties. I have not as yet detected any electronic discharge from the film under light

stimulus. This may be due to my defective experiments, or to a fact noted by Elster and Geitel concerning the photo-electric properties of gelatine. They obtained a vigorous effect from Balmain's luminous paint, but when this was mixed in gelatine there was no external effect. Schmidt's results as to the continuance of photo-electric activity when bodies in general are dissolved in each other lead us to believe that an actual conservative property of the medium and not an effect

of this on the luminous paint is here involved. This conservative effect of the gelatine may be concerned with its efficacy as a sensitizer.

In the views I have laid before you I have endeavored to show that the recent addition to our knowledge of the electron as an entity taking part in many physical and chemical effects may be availed of, and should be kept in sight in seeking an explanation of the mode of origin of the latent image.

ART IN PHOTOGRAPHY.

The publication of the special summer number of that unique magazine, *The Studio*, is an event of the very highest importance for photographers. Periodically *The Studio* issues special numbers, at 5s. each, devoted to some particular and specific branch or phase of art, and the summer number for this year, now ready, is devoted entirely to pictorial photography; its very title, "Art in Photography," being significant of much when employed by so authoritative and influential a person as the editor of *The Studio*.

The contempt and discredit which the artistic aspirations of photographers formerly met with are not now quite so much in evidence, still there are very many who would, in spite of the testimony of modern work, still deny that "art" is possible in photography, an ill-considered verdict which the handsome publication now before us may go far to refute. Anything like sumptuousness in the literature or illustration of photography is exceedingly rare in this country, where for dignity and impressiveness we have no equivalent for such a work as Mr. Stieglitz's "Camera Work" or such volumes as come from the publishing houses of Gustav Schmidt, Berlin, and W. Knapp, of Halle.

Such cause for reproach is now removed by *The Studio* summer number, which will be the means of bringing art in photography in an effective manner to the notice of very many whose knowl-

edge of the best that the camera can do might be restricted to the commercial cabinet portrait.

"Art in Photography" contains 112 very fine reproductions, many of which are in photogravure; of these thirty-six are British, twenty-four American, sixteen French, and similar numbers of German, Italian and Belgian. Accompanying these are six "essays," these being by Clive Holland, A. Horsley Hinton, Charles H. Caffin, and Dr. Enrico Thorez. To the first-named writer, who will be best known by his charming Japanese romances, is apportioned the larger task of writing separately upon the British, French, and Belgian schools of artistic photography, in each of which a large number of individuals are mentioned in such uniform terms of high appreciation that one rather longs for something of a more useful and critical character; possibly Mr. Clive Holland's intimacy with his subject is insufficient to qualify him for such a task, a condition which is occasionally borne out by references in his text, as, for instance, so well known a photographer as Mr. Charles F. Inston is three times in the text and once in the illustration given as Chas. F. Juston. In the course of his article on the English section, however, Mr. Clive Holland has some eminently pertinent and useful things to say. Thus he argues that something more than technical skill and knowledge is essential for the production of a picture, and says:

"Without the natural gift of artistic expression, all the art knowledge in the world will in nine cases out of ten, when applied to photography, prove futile. The elements of composition which go to the making of painted pictures may be acquired, but with the camera one is confronted by a medium of expression far more uncompromising than that afforded by a color-box. It is the knowledge and intuition which brings about the softening and modifying of the uncompromising character of the results usually obtained by the camera, the power of eliminating the crude or superfluous (so far as possible) on the actual negative, and afterwards on the print itself, and the introduction of personal feeling which goes to the making of such works as evoke admiration. Without these qualities all the art recipes in the world are likely to prove dangerous and useless."

Whilst Mr. Clive Holland is not in favor of the more extreme school of pictorialists, he admits that "extremists who have let their discoveries in pictorial work run wild have nevertheless often served a useful purpose by challenging antipathetic and severe criticism." Still, his advocacy for the more academic and moderate treatment is shown by the following: "The limitations of photography, as regards the rendering of color and the fact that the elimination of the superfluous is not easy of accomplishment, prevent it, at all events at present, being considered on the same plane as painting, or gaining its chief successes in a similar way, or by identical methods." In the case of both landscape and portraiture, Mr. Clive Holland asserts that it has been found over and over again to succumb to the ruse of excessive diffusion of focus and flat low tones, in the hope that the resultant photograph may be considered to have been evolved by the same methods as a modern painting by a member of the impressionist school, is but to court ridicule by artists, and invite the stigma of failure at the hands of the less educated. As in monochrome drawing tone values, and a good range of them, constitute, with symmetrical form, the chief charm and elements of success, so in a photograph, for it to be

well and suitably printed, and the original negative perfectly exposed with a long range of tones, will prove the best factors in obtaining a success, coupled, of course, with those of artistic perception, good technique and individualism, which cannot be spared either from painting or from photography.

The essay on the American school, by Charles H. Caffin, we find most interesting, because whilst bestowing proper esteem on the originality and courage shown by the more advanced pictorialists in America, he avoids the unqualified adulation which some of the more prolific, if not most authoritative American writers often bestow thereon. Mr. Caffin considers that much, if not most, of the American work has not been made for exhibition purposes, but in the spirit of tireless experimenting, "not so much to produce all-round results as to try and reach something a little further on than what has already been attained." The same writer remarks that whilst composition, form, and technical qualities cannot be slurred over with impunity, he considers that it is in rendering the subtleties of light that photography will ultimately manifest its most individual and characteristic possibilities, and it is in this that he finds that the American picture-maker excels. He claims that the American experimentalist, in turning to modern American painting for instruction, has not sought to emulate either technique or manner, but has merely adapted to his own medium the general principles applicable to all pictorial representation. In the close analysis of the action of the light, especially in relation to the rendering of atmosphere and values, Mr. Caffin considers the Americans have ventured further and achieved more success than Europeans; still, he points to serious deficiencies, such as lack of regard for form, deficiency in tactile qualities, and in structural force. They are, in fact, apt to "slur over the architectonics of actual building up of the composition, and to be satisfied with the surface appearance; perhaps, in consequence, a little overburdened with emotionalism—in a general way too feminine in char-

acter." "Indeed," Mr. Caffin continues, "I believe it would be just to state the matter more strongly, and admit that in a greater or less degree these deficiencies characterize a large proportion of the best prints produced in the United States. The result is that a number of them together may produce an impression of tentative effort and experimenting rather than solidly achieved results.

The publication is an ambitious one, and is so welcome that we hesitate to be too exacting. Still, some of the reproductions are hardly satisfactory, and

the arbitrary and even confusing divisions in the lettering under the prints is to be regretted. It may truly be said that Mr. Charles Holme, the editor of *The Studio*, has by the production of this grand special number done pictorial photography a remarkable and lasting service by the lavish manner in which he has presented a selection of the best in modern photography, and no photographer who at all values his art should fail to become possessed of a copy of this excellent monument to its present position.—*The Amateur Photographer*.

REPAIRING BROKEN NEGATIVES.

Mr. O. H. Boye, writing on this subject in a recent issue of the *Monthly Review* of the P. A. of California, says: It frequently occurs that valuable plates, which cannot be replaced, are either cracked during the process of printing or are badly broken by having been dropped accidentally. In the latter event, if the negative be broken into several sections, probably the best way to get satisfactory results is by the method of reproduction—viz., mounting the pieces upon a clear glass, fitting them together accurately, and then exposing for a positive. Careful retouching of this plate will eliminate a greater part of the cracks showing, after which a negative can be made and the final retouching done thereon.

Where a negative is divided into but two or three pieces, stripping the film from the broken parts and floating on to another glass is the method that should preferably be adopted. Many formulæ for this process have appeared in print, and work with various degrees of success. Hydrofluoric acid is a messy solution at best, and requires very careful treatment, or the film is easily torn. The formalin method is to be preferred as the safest process, allowing as it does a greater latitude in the handling. The formula recommended below is thoroughly reliable, and also has the merit of being simple to work.

A stock solution of 10 per cent. of caus-

tic soda should be made up. The formalin recommended is the 40 per cent. solution supplied to the trade:—

Solution A—Caustic soda, 10 p.c.

solution	½ oz.
Formalin solution.....	¼ oz.
Water	5 oz.

Solution B—Hydrochloric acid..1 dram.

Water	8 oz.
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The negative to be treated should first be thoroughly cleaned from all traces of varnish. Before doing so, however, take a blunt knife and a straightedge and scratch a line through the film to the glass around the four sides of the negative close to the edges. This will give a clean edge for the solutions to act upon, and also facilitate matters considerably in stripping. The pieces of the negative to be stripped can be supported upon a sheet of plain glass and attached thereto with rubber cement, shoemaker's wax, or any medium of a similar nature that will not dissolve in the solutions. This is for convenience in handling and not absolutely necessary, as each piece can be stripped separately, if preferred. After soaking in water for about a half-hour immerse the plate in Solution A for five minutes, rinse slightly, and then transfer to Solution B for a similar period. Rinse well after this bath and place on the table, face up, ready for stripping. Dampen a clean sheet of writing paper

large enough to lap over the plate all around. Lay this on the film and cover with a blotter. Squeegee the paper into contact with the film by rubbing with your hand on the back of blotter. Take some blunt-pointed instrument or a knife and start a corner of the film by gently lifting it up with the paper. It will come away readily enough, but watch carefully for places that are inclined to stick, touching them lightly with the blunt point will assist in making them yield.

A gelatine-coated plate previously prepared should be in readiness. The formula for this substratum is the same used for the carbon process. A clean glass plate immersed in this solution while still warm and left to drain and dry is what is required. Rinse the surface of this plate well with water and lay flat on table. The film can now be lowered into position on its new support and rubbed into contact under a blotter. Remove the paper, and should any bubbles remain between film and glass they can be worked out by dabbing them lightly with the finger toward the edge of the plate. The remaining pieces can now be transferred in the same manner, but in adjusting the pieces together it is

important that an over-lap of about one-sixteenth of an inch be allowed for shrinkage in drying. While drying these places where the film overlaps, it should be occasionally dabbed or pressed into contact in order that it adheres tightly to the glass at these points. After drying, should the overlap be too great, scraping off the surplus film with the etching tool will result in securing a perfect match.

Negatives that are simply cracked and not broken through the film are quickly transferred by this method. This process is also used for the reversing of negatives for the carbon process where a single transfer print is desired. Where an enlargement of a negative is wanted, say of a cabinet to an 8 by 10, the stripping process is the quickest solution of the problem. The hardening bath is omitted and plates are simply treated by immersion in the hydrochloric acid alone. The film expands considerably after leaving its support, more than doubling its former size. Should this expansion prove too great immersing it in alcohol will cause it to contract to the point wanted, or almost back to its original size.—*Photographic News*.

THE LONDON PHOTOGRAPHIC SALON, 1905.

The London Photographic Salon, 1905 (13th year) will be held at the Royal Water Color Society (5 A, Pall Mall, East, S. W.) from September 15th to October 21st, 1905.

The aim of the Linked Ring is to exhibit only photographs displaying originality of conception expressed in a pictorial manner.

All the work of American Photographers destined for the London Photographic Salon must be submitted to a Selecting Committee sitting in New York, and composed exclusively of American members of the Linked Ring, whose names are:

C. Yarnall Abbott, A. L. Coburn, F. Holland Day, Mary Devens, W. B. Dyer, R. Eickemeyer, Frank Eugene, Gertrude Kasebier, Joseph T. Keiley, Margaret

Russell, Eva Watson Schutze, Sarah C. Sears, Eduard J. Steichen, Alfred Stieglitz, Edmund Stirling, Clarence White.

The pictures approved by the American Selecting Committee will be accepted for hanging without passing the London jury.

Pictures for this committee must be addressed as follows:

"For the London Photographic Salon: Mr. Alfred Stieglitz, care of Geo. F. Of, 3 East 28th Street, New York City," and must be delivered at that address, express prepaid, together with accompanying entry form or list by July 24th. Rejected prints will be returned promptly at the expense of the exhibitor. Pictures that have already been exhibited in London will not be accepted.

Pictures entered in any other exhibi-

tion open in London at the same period are likewise unacceptable. On such pictures as are sold, a commission of 15 per cent. will be charged by the Salon.

Prints must be separately framed. Each frame must bear name of exhibitor, number and title of picture, and price, if offered for sale. A corresponding record of particulars, on official entry form (or list where exhibitor is unable to obtain such form), must also be furnished.

While it is desirable that all entries should be sent framed, persons desiring to submit unframed prints may do so.

Such unframed prints must be so

mounted as to protect them from injury, and must be properly labeled with title, address, etc., to correspond to their entry form.

Such unframed prints as are accepted by the jury will be framed at exhibitor's expense, by Geo. F. Of, 3 East 28th Street.

There will be no charge to exhibitors for the forwarding of exhibits from New York to London and their return to New York. The only forwarding charges to exhibitors will be express charges from New York to home of said exhibitors.

JOSEPH T. KEILEY,
For Alfred Stieglitz.

HOT WEATHER TRIALS AND TROUBLES IN THE PRINTING ROOM.

By JOHN EVERARD.

Of the many trials thrust upon the photographer by the advent of warm weather, none are more troublesome than those which occur during the production of a print. Invariably the source of trouble lies in the contrasting temperatures of the toning and fixing solutions and the wash-water. Such variations—alternately softening and hardening the gelatinous emulsion of the prints—cause blisters, prints to stick to the polishing slabs, and even partial dissolution of the printed image.

BLISTERS.

The manner in which a rise or fall in temperature affects gelatine is especially interesting to those who cannot understand the "whys and wherefores" of blisters; when considering the question of influence of heat and cold, on gelatine, the worker should never lose sight of the fact that heat expands, and cold contracts. Therefore, as the sensitive emulsion of a piece of P. O. P. is composed largely of gelatine or gelatinous substances, the effect a luke-warm toning mixture, followed by an icy-cold fixing bath or wash-water, would have on a gelatino-chloride print, is not difficult to imagine. The effect, briefly, is this: on immersion in the toning solution, the gelatine emulsion gradually swells, not visibly, but nevertheless it *does* swell, in a more

or less degree, according to temperature of the toning solution. On removal from the latter—which from frequent dipping-in of the fingers has probably become luke-warm—the print is plunged into cold water: the swelling process stops immediately. Should the water be only a few points colder than the toning solution, the gelatinous emulsion is not greatly affected by the change (this may be taken as an explanation of the absence of blisters during cooler weather). But, should the wash-water be very much colder (and the difference in temperature will be increased in hot weather) the gelatine not only ceases to swell, but *contracts* immediately, and the result is—blisters. Should the latter make their appearance not in the wash-water, but *in the fixing bath*, it may be taken that the toning solution and the wash-water are not injuriously different in temperature; nevertheless, they differ sufficiently from the fixing solution to the extent of producing blisters on the print *when placed in the hypo*: for the latter possesses the peculiar property of remaining cool all the year round.

THEIR PREVENTION.

Obviously then, if you would prevent blisters making their appearance, you must keep the toning and fixing solutions at a temperature equalling that of the wash-

water. Should the weather be very warm, and a rise in temperature of toning bath imminent, stand the toning dish on a larger dish containing ice. Use a thermometer, and do not use the toning or fixing solution until their temperatures equal that—or nearly so—of the wash-water. Early morning and late evening are the best hours in which to perform the toning operations: the solutions and water are more likely to be of an even temperature some hours before, or after, the sun has attained his greatest strength. The most desirable temperature of toning and fixing solutions is 60 deg. Fahr. Keep the fingers out of the toning solution as much as possible: the heat from the fingers raises the temperature of the solution very considerably. Of course the prints must be kept continually on the move; but use vulcanite forceps instead of the fingers. The emulsion is often so soft that on coming into contact with the hands the silver image melts completely.

In the old albumen—or silver—process, blisters frequently make their appearance after the prints have been placed in the fixing solution. The fault in this instance generally lies in the strength of the solution—too strong a fixing bath quickly produces blisters.

Blisters on bromide prints are sometimes produced in a similar manner; but such imperfections are more often caused through inequalities of temperature of developer, fixing solution, and wash-water.

THE CURE.

The point as to how far it is possible to cure blistered prints rests entirely on one thing—the size of the “undesirables.” Very small blisters may be reduced by immersing the prints—immediately they become affected—in a solution of alum, $\frac{3}{4}$ oz.; water, 20 oz. An alum bath should always be ready to hand. The blisters may be pricked with a very fine needle, but the print must subsequently be very carefully handled, otherwise the tiny holes will spread. Large blisters are very awkward, and the only satisfactory method of reducing them is to immerse the print in an alum bath, prick the bubbles, and finally squeegee the print to a ferrotype plate: it is scarcely necessary to add that the print will be spoilt unless handled tenderly during all operations.

Blisters on albumen prints may be reduced by immersion in a solution of salt, 1 oz.; water, 20 oz. It may be necessary to prick the blisters, but only do so as a last resource. Bromide prints—blistered—may be plunged into a formalin bath, a convenient strength being 1—20. The prints may then be squeegeed to a piece of fine ground glass, and on removal the blisters will almost entirely have disappeared.

“SQUEEGEEING” TROUBLES.

During warm weather gelatino-chloride prints have an unfortunate knack of sticking to the polished slab; this is especially so when using plate-glass. Personally, I have always preferred the cheap metal plates known as “ferrotypes.” They are pliable, easy to clean, can be cut up into any size, and cost but a few cents each, size fourteen inches by ten. One of the secrets of successful “squeegeeing” in hot weather is in allowing the prints to dry once before placing them on the slabs. Another item of importance is, not to use the squeegee too vigorously. I clean my ferrotype with benzine, immerse them with the prints in a tank of water, bring prints and plates into contact *beneath the surface*, lift both out, lay a sheet of blotting-paper, folded in four, over the top, and run the roller firmly but not roughly three or four times up and down. The plates are then stood up on end in a warm current of air, and in a few hours the prints fall from the slabs of their own accord. By allowing the prints to dry before squeegeeing them, the gelatinous emulsion becomes firmly set; unless immersed for a number of hours, the emulsion never becomes as tender as during the toning operations. Plateglass for enamelling purposes should be scrupulously clean, the smallest speck of dust removed, and the surface polished with a mixture of beeswax, 10 gr.; spermaceti wax, 15 gr.; turpentine, $\frac{1}{2}$ oz.; benzole, $\frac{3}{4}$ oz. A very small quantity of this mixture is sufficient to produce a highly glazed surface.

When “matting” prints, the latter should be immersed first of all in an alum solution, allowed to dry once, and then squeegeed lightly to fine ground glass or “matted” celluloid. In this instance, the previous drying operations is *absolutely essential* to success.—*Amateur Photographer.*

PORTRAIT.

Henry S. Redfield, Hartford, Conn.

Prints for criticism; only one at a time and only once each month; to be sent to Dr. John Nicol, Tlaga Centre, N. Y. The coupon found in our advertising pages must be attached to the back of each print.

2008. W. J. BEAN.—"The Shade of the Brook" puzzles us. Everything is more or less in shade, and the "more" much more than the less, except for a square patch of white paper in a portion of the right third. What this white patch represents we cannot make out, but it seems to stand up at a right angle to what is undoubtedly water coming towards the observer. Doubtless you, acquainted with the subject, can see all that you intended to represent, but lacking that acquaintance, we confess to not understanding it, and our inability to make anything of it.

2009. MAX BAUMBERGER.—"The Birch" often lends itself to the pictorial, but it is not so here, neither in selection nor

technique. What we presume you intended for the objective point, the three-trunked tree on the right, does not appeal to us as of sufficient importance, and surely you never saw white and black so contrasted on any tree. Then, the trees that are not birches are simply black lines, blacker than ever were the trees of a burned forest—the aftermath of a forest fire. You must study composition more effectively and learn how to give sufficient exposure before you can make truly pictorial photographs.

I KANASAWA, of Tokyo, Japan, sends four prints, which for obvious reasons we make an exception to our ordinary rule of noticing only one each month.

2010. "LAKE NEAR TOKYO" is very much like many of our own, winding through and around densely wooded islands, and exposed under conditions that have given reflections almost as distinct and well defined as the objects themselves, the line of demarkation between the object and its reflection being exactly in the middle. In spite of this last being generally a weak point, the composition is effective, and as a very decided indication of atmosphere begins at that line its weakness is hardly if at all felt. In most photographs of this kind the water is the weakest part, there being nothing on the calm, even surface to suggest it but the reflections; but the author of this has done what we have never before seen, drawn on the negative a series of free-hand lines running horizontally across, beginning at the aforesaid line of demarkation and extending half across the foreground, or should we say "forewater," and as they print white on the dark reflections the ripple is beautifully suggested.

The first impression suggests under development of both negative and print, but

No. 2010.

LAKE NEAR TOKYO, JAPAN.

I. Kanasawa.

No. 2013.

SCHOOL-BOYS.

I. Kanasawa.

distance should remember that good technique and the inclusion of as much as possible of anything that is to us unusual should be their aim.

2013. "SCHOOL-BOYS." We hardly understand the title in its application to what is apparently a street with car rails and a trolley car, and some seven or eight figures, big and little, most of them carrying the well known Japanese umbrellas. This has the fault of most of the others, sky and everything in direct light white paper from over development resulting from under exposure. The exposure was made on a "very rainy" day, but the effect of such whiteness suggests brilliant sunshine. Abandon such short exposures and aim at true values which nothing but *sufficient* exposure can give, and we shall be glad to hear from you again.

2014. T. C. PITTS.—"Landscape" is in almost every way satisfactory, except for a too short exposure. Surely you recognize the unnatural blackness of the parts of the tree-trunks in the shade and can feel how different would be the effect of a nearer approach to nature. The subject and selection are admirable; the leaning tree on the right beautifully supported by the small bush or little tree on the left; nor did we ever see a more beautifully broken up or more interesting foreground, and yet alas! every one of the objects that would have given its charms are, in the shade, black as night. With sufficient exposure this would have been one of "the pictures of the year," instead of, as it is, "a might have been." Try the subject again, and, if possible, with the same time but with a stop two sizes larger, which means an exposure four times as long, and we shall be glad to see the result.

2015. WILL. G. HELWIG. — "Preparing the Turkey," a woman standing before a window placing the "Thanksgiving" turkey into the baking pan, although one who knows more about that operation than we says she is "putting in the stuffing." Be that as it may, it is a fine piece of work with just a little too hard lighting. At the first glance it is thoroughly satisfactory; but more careful study reveals the false key; as a light sufficiently intense to produce

NO. 2011.

BUDDHA.

I. KANASAWA.

as we return to it again and again it grows upon us until we find it altogether satisfactory.

2011. "BUDDHA," a gigantic seated statue in the open, and about twenty-two feet high, judging from the figure of a man placed in front of it, doubtless for that purpose. This photograph induces us to say that we are sorry to see that the short exposure craze has reached Japan, this having got only 1-5th of a second on a "wet day," the result being the usual white paper sky, with everything else in direct light equally white without a trace of texture. Buddha would not have moved even if three or four times as much had been given, and, with suitable development how great the difference!

2012. "RAILWAY STATION IN FOG" does not appeal to us as in any sense pictorial, although the fog is well represented. We wish it had been on a smaller scale, so as to show how the crude looking bridge is supported. Those sending prints from such a

No. 2014.

LANDSCAPE.

T. C. Pitts.

No. 2014.

THE MILLER.

Jas. A. Young.

2018. F. E. SEDGWICK—"Saw-mill" is simply worthless from too short exposure, everything being either white as paper or black as soot. You never saw logs or sky so white and never shadows so black.

2019. G. H. BURGESS—"On the Rocks" has the same fault, although not quite to the same extent as the preceding. Rocks and sky are far too white, while the water is represented by black, and the girl would pass for pretty deeply "colored." The subject is good, fine indeed and finely arranged, and with a suitable exposure would have been a pretty little picture, but surely you should see it as well as we that white and black cannot properly represent water and stone, to say nothing of sky as white as the printing paper. Two or three times as long, or a lense all that faster was required.

No. 2016.

P. C. SANGER.

WHEN THE BOSS IS OUT.

the high lights on hands and hair would have made a greater impression on her surroundings. The remedy was longer exposure, so that development could have been stopped before *all* the lights were in the negative, equally opaque. In spite of that fault, however, it is a fine picture—pose, expression, and indeed everything else—all contributing to make it so.

2016. P. C. SANGER—"When the Boss is Out," a boy at a desk looking over some papers, the "boss" in this case being, presumably, the father, the desk and its ornaments suggesting a private room rather than a school or place of business, and the boy too young for the latter. Subject and arrangement are fairly good, as is also the photography, although there is room for improvement in the placing. The direct square is rarely effective, and in this case an inch added to the space above the head would have been a decided improvement.

2017. J. L. MERHK—"Eventide" is a pretty little marine with the low-down under clouds thin enough to produce a long band of light on the rippling water. Water and sky are good, but the light on the water is unnatural because far too white, a result of a too prolonged development. It should not have been whiter than the broad bands of cloud on the left, and then the suggestion of "eventide" would have been perfect.

2020. T. C. KEYS—"The unnamed print is a fine subject, from a fine and effective point of view, made simply worthless and a waste of material from under exposure. A foreground of what might have been fine rippling water, but is merely white and black

No. 2022.

W. F. MAURER.

AN ATTENTIVE AUDIENCE.

No. 2013.

PREPARING THE TURKEY.

Will G. Helwig

paper, a sky equally white and much well balanced and well arranged foliage blacker than ever foliage was under any light, far less under a light that showed such a sky. An exposure three or four times longer was required to make it worth anything but the waste basket.

2021 S. F. CLOWNEY. — "The Brook" might have been made attractive from a different view point, but the two horizontal masses of white that almost fill the foreground are far from pictorial. Then development has been carried much too far making both sky and such of the water as is not in shadow simply white paper. Another fatal fault is want of definition. We do not, of course, object to breadth, even in some cases to the "fuzzy" extent, but in such a subject, and especially on a $3\frac{1}{2} \times 2\frac{1}{2}$ print, it is absurd. Focus better and stop development in time, and you will do much better. Such small photographs are eminently suitable for enlarging when full of delicate detail with nothing white but the highest of high lights, if such there be in the subject, and nothing really black; but this is far, very far, from up to that mark.

2022. W. F. MAURER. — "An Attentive Audience," two children in a hammock,

and, as indicated by the title, evidently, much too evidently sitting to be photographed. Such an arrangement may please the parents, but is fatal from a pictorial point of view. We have said over and over again, but apparently not often enough: "Never pose children and tell them to keep still, or indeed anything else, but let them pose themselves when you want to make one of the most charming of all photographic pictures. The first glance at a print of this kind, in which the pretty little faces betray such evident desire to do as they are told, makes one laugh, not at them but at the thoughtlessness of the photographer. Try again and let them tumble about in the hammock as it is so natural for children to do, and watch and wait for the happy chance. Then when you come to develop don't carry the process so far as make foreground, dresses and sky simply white paper, but something more like their natural tone or color.

2023. A. G. HOLCOMBE. — The nameless print, a foreground of fairly good rippling water occupying more than half the space, a narrow strip of black foliage and the rest a white paper sky, is hardly of sufficient interest to warrant its being printed except for the little boat—three-quarters of an

inch in a four and a half-inch print, with four girls in it. To those four it is, of course, an interesting picture, but we should suppose that even to them it would look much better if trimmed to about an inch and a half wide and two inches high. A longer exposure and shorter development would have given a better photograph, although it is considerably above the average of those that come to the Portfolio.

2024. JAMES A. YOUNG.—"The Miller" sends us back to our juvenile days when we liked to catch and eat a handful of oatmeal warm from the stones, although here both miller and machinery are more modern than were *our* old miller and older mill. The photograph, although of the record of fact order, is decidedly good, and suggests much more than it shows, might indeed furnish texts for more than one sermon, especially if it is as suggestive to others as it is to us.

2025. H. P. DAHLÉN.—"The Tow-Path" is a fine subject from a good view point and of fairly good technique, although it would have been more effective taken with a lens of longer focus. The lens employed took you so close to the subject as to bring the immediate foreground and extreme dis-

tance too near each other, giving a perspective that while correct appears to be false, giving what is often called "photographic perspective." There is also a lack of atmosphere that would have added a charm to the picture, a little more of the haziness in the distance. We may add, however, that we do not like the near tree on the left too closely repeating the vertical margin, all the more that its removal would have enabled you to place the "path" not so much in the center of the composition. But all this being said, there is a good deal in its favor, a good deal to admire. Although slightly low in tone the values are fairly true, and both contrast and balance are satisfactory; while amidst the mass of under exposures that continue to come in spite of all that we have said, such a properly exposed print as this is refreshing, even comforting.

NOTICE.—"My Little Japanese," by Jules A. Bourquin, and "The Devotee," by W. G. Corthell, the one for our Portfolio, the other for Competition, came without coupons, and are out of the September number, but may be available for that for October if coupons are sent in time

Books for review and apparatus and material for examination and report to be sent to Dr John Nicol, Tioga Centre, N. Y.

The Photo-Miniature, No. 79. Circumstances beyond the control of the editor of this interesting series of monographs have prevented their regular monthly appearance to an extent that made the last—69—bear December as its date. Satisfied as to the impossibility of making up the leeway, he has cut the Gordian knot by omitting the intervening months and boldly dated this July, with a promise of regularity in future.

The July number, then, deals once more

with pinhole photography, and of an advanced order, and as it is written by Dr. D'Arcy Power, of whom, in connection with pinhole construction and pinhole work, we have frequently had occasion to speak favorably. We need only say that what is not to be found in it is hardly worth knowing. We may add, however, that few will read the monograph without at once desiring to take to pinhole pictorialism. It must not be forgotten, however, that the keynote to pinhole, as well as to lense photography,

is correct or rather sufficient exposure. Hear what Dr. Power says: "In all photographic manipulation there is probably nothing so fundamentally important as the correct determination of the exposure time, and he gives a method for its calculation that we and many others have found more than fairly correct. Although the monograph contained nothing else it would, to pinhole workers, be well worth its price.

* * *

PHOTO-MINIATURE, No. 71, the August number, deals with "Marine and Surf Photography," and by two authors, F. J. Mortimer and J. H. McCorkle, although practically the only difference in the advice they give is the one employs a tripod and focusing cloth, while the other says "a tripod is of very little use;" but, from the evidence of the illustrations, we are inclined to hold by the tripod.

The advice on the whole is good and sufficient, if carefully acted on, to give good results, except in the matter, the crucial matter, however, of exposure, Mr. Mortimer's being such as, judging from most of his illustrations, to lead to what he condemns, rocks like masses of coal, and froth or foam whiter than it ever is. We write this paragraph within a few feet of a beautifully grand rolling surf, and the foam or froth is not so white as white paper.

Photographs of surf must be exposed long enough for rocks and the shady side of waves to develop to their natural tone before the spray or froth—the higher lights become opaque.

* * *

THE BISSELL COLLEGE OF PHOTO-ENGRAVING sends its illustrated catalogue of fifty-two pages, which should be in the hands not only of every one intending to adopt

photo-engraving as a trade, but in the hands of every photographer; as we cannot conceive a sideline of more value to an energetic photographer.

* * *

"WITH THE CAMERA," the usual monthly circular, congratulates the college on having, by the purchase of the Austin College, secured another fine campus, tennis court, and golf course; tells of visits from former students, all of whom are doing well, and, perhaps best of all, of the marriage of Professor Grubb, who, with his "better half," have taken up their residence in Effingham. The only shade of sadness is a notice of the death of Irving L. Sanborn, of Grand Rapids, Mich., a pupil of class 1901, who from his ability and brightness had before him a bright future.

* * *

FROM THE AMERICAN ARISTOTYPE CO., Jamestown, N. Y., we have received a sample package of Aristo Gold Post Cards. To say that we are pleased with the results is putting it mild. The cards print rapidly and yield a pleasing sepia tone by simply fixing in hypo and washing. By giving them a preliminary dip in a solution of common salt and water, a purple tone is obtained. Save the Eastman Sepia Postals, there is no process more simple or quick, and Aristo Gold Post Cards should become very popular both with amateurs and professionals. The latter will find in the picture postal a very convenient means of getting an extra dollar or two out of a customer. The price of the postals is 30 cents per dozen or \$3 per gross, and the American Aristotype Co., Jamestown, N. Y., will be pleased to send a free sample package to all who would like to try them.

THE MONTHLY FIVE-DOLLAR PICTURE COMPETITION.

Exception may be taken to the reproduction of "Evening," the first prize picture, and we only print it as evidence. The original print is in dark green carbon, full of detail, even in the shadows, but the engraver claims that he cannot do any better with the copy, green being one of the worst

colors to reproduce from. We merely give the explanation so that we be not accused of awarding the prize to a smudge. The award this month is divided as follows: Henry Berger, Jr., Portland, Ore., "Abend, Frieden," \$3; Ed. H. Pierce, "In a Tea Cup," \$2.

ABEND, FRIEDEN.

First Award in Monthly Competition.

Henry Berger, Jr.

The above reproduction conveys no idea of the original print which is in dark green carbon and full of detail, even in the shadows.

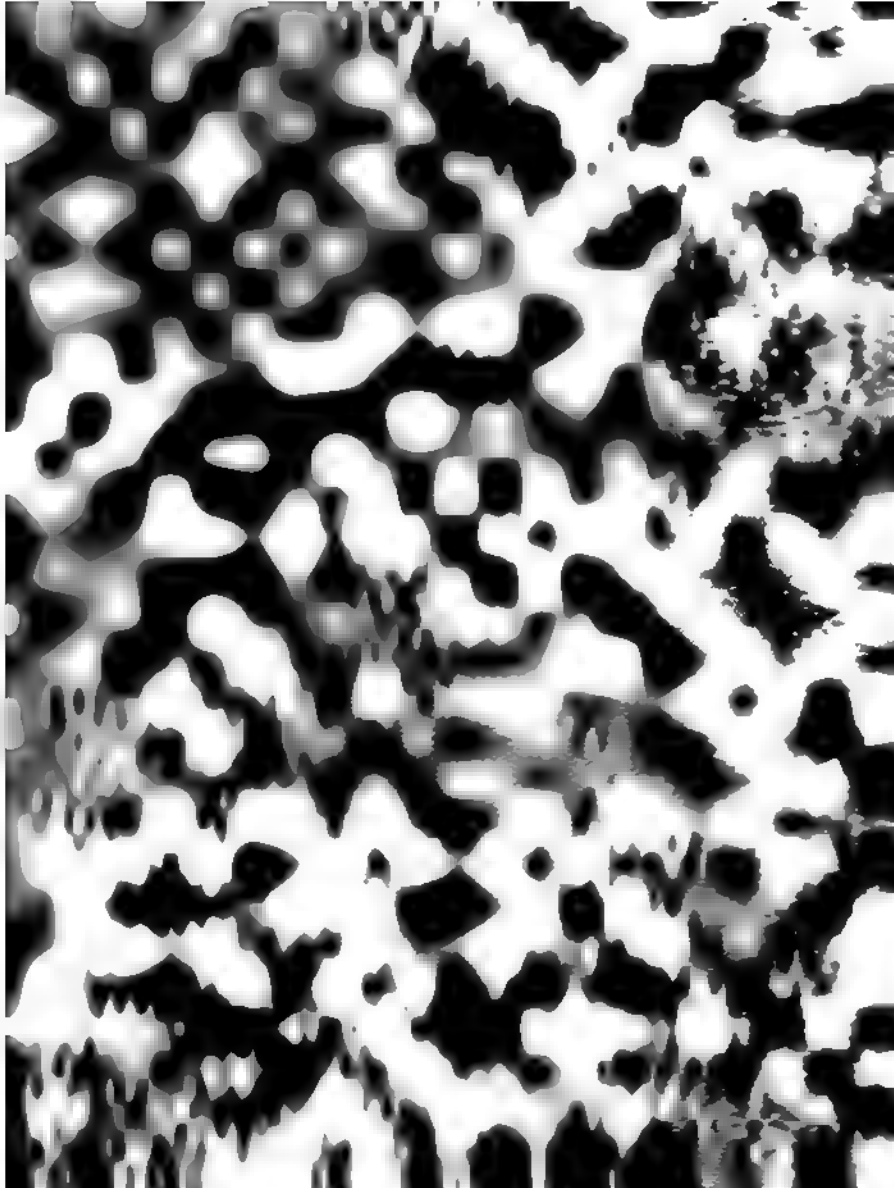
Second in Monthly Competition.

IN A TEA-CUP.

Ed. H. Pierce.

INTERIOR.

Henry S. Redfield, Hartford, Conn.



GRAPES.

Henry S. Redfield, Hartford, Conn.

LETTERS TO THE EDITORS.

Communications for the editors should be sent to Dr. John Nicol, Tioga Centre, N. Y.

A Matter of Exposure.

DEAR SIR: I read a long article in the *Camera and Dark Room* about the strength of the light on the sea and seashore, and the claim is that it is four times as great as on inland.

I like that idea, for I can easily reason it out as follows: Suppose that the sun gives one unit of power inland, of course it gives the same on the water, but they say that the reflections from the water gives three units more, making four units in all. That is, that the water reflects just three times as much light as it receives.

How much more light *does* a sail get from the reflection from the water when it is so located that the sun does not glance the light *directly* to it?

This idea of the great power of reflected light is also much spoken of in regard to snow scenes, and I find as you do that almost every snow scene gives the houses and trees as *black as charcoal*, in spite of the *immense* amount of light that is reflected to them.

I find that some of the best of my pictures on the seashore are with an exposure of 1-5 sec. on F. 16, *bright days*.

Please shake this matter up in the *AMATEUR*. Yours respectfully,

WILLIAM H. BLACAR.

[Our correspondent is a diligent reader of the magazine, and therefore knows that in our notices of both marine and snow scenes we have, perhaps more frequently than not, found them much under exposed, while on another page he will find that, in our opinion at least, the illustrations by F. J. Mortimer to his article on "Marines," even although he is generally considered *facile princeps* at that work, are, to use his own simile, with rocks like masses of coal, and the froth or foam as white as the paper on which it is printed.

During the eleven seasons that we have spent here, between the ocean and the Great South Bay, we have had ample opportunities of photographing and seeing the photographs of others, and in reply to his suggested questions say with confidence that

with such exposures as are generally recommended and are given sails in the shade are simply black, and that "sufficient" exposure for both marine and snow scenes, while varying to a certain extent with varying conditions, is never so short as a fourth, rarely indeed so short as a half of what is necessary for like conditions on inland scenes.—Eds.]

See article on "Tone Values" in this number.

Removal Notice.

NEW YORK, August 25, 1905.

To the Trade:

On September 1st The Folmer & Schwing Manufacturing Co. will remove their factory and office to Rochester, N. Y., where they will have increased facilities for the manufacture of their products.

For the benefit of the trade they will retain their salesroom at 175 Elm Street (corner of Broome Street), New York City.

Trusting this will not be too late to receive notice in your September issue, we are,

Yours very truly,

THE FOLMER & SCHWING MFG. CO.

As we noted in our last number the Folmer & Schwing Co. are offering at bargain prices a number of cameras of models which they will not manufacture hereafter, and as there are on the list some very desirable outfits anyone contemplating the purchase of a high-grade camera should make early application for the "Bargain List."

A Chance for Weather Prophets.

NEW YORK, September 2, 1905.

Editor AMERICAN AMATEUR PHOTOGRAPHER,
361 Broadway, City.

DEAR SIR: As an amateur farmer I am interested in the weather. I have gathered meteorological data for years, but as yet have not found the slightest basis on which to ascertain the state of the weather even twelve hours ahead.

The Government weather predictions are

very faulty, and as many laymen claim they can predict the weather more accurately than the weather bureau, without any of the elaborate apparatus of the Government, I hereby appeal to all the weather prophets of this country to enter a thirty-day contest for a cash prize of \$100 which I will give to whoever predicts the weather most

accurately, and will tell for the benefit of the public by what methods he arrived at his conclusions. If the Editor will kindly publish this and aid in advancing the science of meteorology, I will be grateful.

Yours very respectfully,

F. R. FAST.

97 Nassau Street, New York.

CONVENTION POSTPONED.

AUGUST 17, 1905.

Postponement of Southern Tri-State Photographic Convention that was to be held at Birmingham, Ala., September 12-15, 1905, is hereby announced until March, 1906 (exact dates later). Owing to the stringent quarantine regulations now enforced because of the prevalence of yellow fever in New Orleans, La., it was decided to postpone until a more favorable time for all, our Northern and Western friends, especially, as they will find our Southern climate particularly delightful about this time of

year, and just before the Easter and Spring rush begins.

I also wish to call attention to the prize (Gold medal) offered for the best 8 x 10 (one) portrait by any one *not* a member of this association.

Also to state that special arrangements have been made to admit members from Florida and Louisiana. Those of Louisiana desiring membership will please write Mr. Moses at New Orleans, and of Florida write to me direct. Fraternal yours,

M. ED. WILSON,

Sec. Sou. Tri-State Photo. Assoc'n.

Questions for answers, matters for publication, and all communications to the editors should be sent to Dr. John Nicol, Tiooga Centre, N. Y.

ADAM MORRIS.—We do not reply privately nor recommend the articles of any particular maker except when they are sent for review; we may say, however, that we are generally suspicious of such as are claimed to be "the best in the world." We never use bromide unless we think it necessary, which is hardly ever, in the development of our negatives either on glass or celluloid.

TOM WILSON.—We can easily understand your dilemma, as the cause is not far to seek. During six months "worrying" with photography, having taken and acted on the advice of four times that number of obliging friends as to plates,

developers and methods, it would have been strange if you had achieved anything but "failure! failure!! failure!!! every last being worse than the first." Our advice is, select a plate by any of, say, any one of the best known six makers, fast but not the fastest, because, as a rule the slowish plate is more easily manipulated than the very fastest, or most rapid. Which of the makers is of little or no importance as their output is all equally good although they may differ slightly as to how to get the very best out of them. Use only the developer recommended by the maker of the plate, and prepare it yourself. Study and obey

the instructions to the best of your ability, getting all necessary information from the hand-book you mention; stick to those for another six months and we have no hesitation in saying that by that time you will be able to get good results on any ordinary plate by any ordinary developer.

Glossy Prints.

D. R. S.—No, we do not like prints on "highly glazed" P. O. P., although that is no reason why you should not both glaze and like them. As you can get glass easier than ferrotype plates flatted sheet will answer perfectly, and, if perfectly clean, need no preparation. Instead of laying the prints on the glass out of the washing water it is better to dry them first, and just before squeegeeing them place in water till sufficiently limp. It is said that prints that have been immersed in a solution of formalin are less liable to "stick," but we never had that trouble.

DR. J. E. BAKER.—Thanks for "photomicrographs." They are remarkably good, especially the single diatom enlarged 900 diameters, which we may say is wonderfully fine. You have a fine slide from which the disc including the many diatoms was made, the 140 diameters.

The *Bromide Monthly* is still, we believe, published by the Rotograph Company, 771 East 164th Street, New York.

Speed vs. Covering Power.

(MISS) R. W. SANFORD.—The dealer's statement to the effect that the lens he recommended was more rapid than that recommended by your friend is quite consistent with our statement to which you refer, viz., that all lenses were practically equally rapid. The confusion in your mind arises from your not having given sufficient importance to the latter part of our statement—"With equal F values," The largest aperture of the lens recommended by your friend is F8, while that of the lens recommended by the dealer is F5, just twice as quick. But if the latter is stopped down to F8, the action of the two will be equal.

Copyright of Little Value.

A. SCOTT.—We have answered this question at least a dozen times. It is not the

subject or point of view that you have registered or copyrighted but your photograph of it; and while it may be a "mean trick," as you say, to put the points of his tripod legs into the same holes in his effort to get an equally saleable postcard you cannot prevent him from doing so. If you are, as you say, "an experienced amateur" you should have little difficulty in competing advantageously with a "professional for perhaps the first time outside his studio." Pay no attention to the "ragging" of your fellow-members on your commercialism, but under no circumstances attempt to meet the competition by reducing the price. Rather use, if possible, a better quality of card and charge a few cents more per dozen. Your customers may easily be led to see that even at a higher price they are getting better value.

A Business Problem.

(MRS.) RUTH G.—We cannot advise you either as to the quality of your retouching or to the fee you would probably get for it. We may, however, say that the face of the male figure No. 3 is very much overdone, every trace of texture having been obliterated. Ladies of a certain, or rather uncertain, age are sometimes said to prefer the eggshell style of retouching, but we should not expect it to become so popular as to make it a paying kind of work. We doubt whether without considerable advertising you would be likely to secure a sufficient film developing connection to keep two or three ladies employed, and think you are right in saying that the prices for that kind of work are too low to enable one pair of hands to support and educate your family of six which has recently lost its head. We are very sorry to throw cold water on your scheme, but we do not think it would be prudent to invest the welcome insurance money on it.

PUZZLED.—See reply to Tom Wilson, and article by Via Media on another page.

INTERESTED.—We do not give the addresses of our correspondents or contributors without their permission, but letters addressed to any of them, and stamped, sent under cover to us shall be forwarded.

THE PATRIARCH

Pittsburg Photographic Society Exhibition.

O. C. Reiter

THE AMERICAN AMATEUR PHOTOGRAPHER.

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NO. 10

Edited by DR. JOHN NICOL and F. C. BEACH.

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OUR MONTHLY COMPETITIONS.

BY DR. JOHN NICOL.

IN criticising photographs sent to "Our Portfolio" I have generally said just what I think of them "without fear or favor," taking it for granted that they were sent for that purpose; my only desire being to, so far as possible, be helpful to the readers of the magazine.

Photographs sent for the "Monthly Prize Picture Competition" are in a different category, and from the first it was understood that they were not subject to criticism. It was taken for granted that pictures so sent would be at least up to a standard considerably above that of the work of the beginner; that in technique at least they should be fairly good. But the experience of the last year has shown that I was mistaken; photographs, many, indeed, have come, quite as bad from a technical point of view as the worst that come to the Portfolio, and as only ignorance of what constitutes fairly good technique—the technique essential in a picture—can account for such being sent, I have resolved to point out such faults to the senders.

I do not mean to criticise all that are entered for competition—only such as should not have been sent, and only under the title of the prints, or the initials of the senders, they not having been sent for criticism.

My object, of course, is the same as in "Our Portfolio"—to be helpful to aspiring pictorialists—and as the names of the competitors will be suppressed there can be no cause for offense in whatever may be said.

While on the competition it may not be out of place to say that it may almost be taken for granted that snapshots, however "lucky" they may happen to turn out, are not likely to be winners. Only very experienced photographers can hope to make anything worth sending by snapping. Good technique is the basis of all good work, and that cannot be obtained without sufficient exposure. Put the camera on the stand, study the subject both on and off the focussing screen, and always expose for the shadows, and never continue develop-

ment long enough to make anything but the highest of high lights, if such there be in the subject, opaque in the negative.

Since writing the above the postal authorities have done another of the things which "no fellow can understand," having prohibited the insertion of the competition coupon for a reason known only to themselves, but which we have learned long ago to

accept without question. Nor is it of great importance. The only use of the coupon was to show that the competitor was a reader of the magazine, and that can be ascertained in another way. In the meantime, however, we shall gladly accept and place in competition all photographs that come with "For Competition" clearly written on the back of the mount, and trust that only readers shall so send.

GOOD NIGHT

Pittsburg Photographic Society Exhibition

Sam'l A. Martin.

SUITING NEGATIVES TO THE PRINTING PROCESSES.

BY R. CHILD BAYLEY.

QUESTIONS as to the suiting of negatives to the printing method and *vice versa* come so frequently that we gladly avail ourselves of the following article by R. Child Bayley, the editor of *Photography*, which we clip from that magazine:

"The questions—or rather the question, because it is really one enquiry—set out in the letter which is given above cannot be answered within the limits of a reply in the section of the paper devoted to such matters, and I have therefore taken it as the text of the article which follows, knowing, as I have means of doing, that the writer is by no means the only reader of *Photography* who has found himself confronted by the difficulty which troubles M. C. B.

"A COMPROMISE NEGATIVE.

"The first specific enquiry, 'Is it possible to have negatives equally good for contact printing and enlarging?' can be answered in very few words. When bromide paper is to be used in both cases, it is only possible if the negative is not the best for either purpose. That is to say, if it is a trifle hard for enlarging, it will be a trifle weak for contact printing. It can certainly be made so that it will give a good, but not the best, result by both processes. It will, if printed with care, give a delicate but not too flat print in platinum. No negative that is not much too strong for direct enlarging will give a good carbon print. On the other hand, the negative that

gives a good carbon will give a presentable though rather strong platinum print and a very hard and chalky bromide or plain P.O.P. print.

"THE EASIEST TO GET, BUT NOT THE BEST.

"The question, then, is what sort of a negative is to be aimed at? The 'compromise' negative, which shall be a little too hard for enlarging and a little too thin for platinum, is what a good many will select, and there is a good deal to be said for it. It makes development much easier, because if the developing has been carried a little too far so much the better for the contact print or bromide, P.O.P., platinum, or even carbon, while if it has not been carried far enough all the better for the enlargement. A middle course in this, as in so many other cases, is what many select, no doubt. MY OWN PREFERENCE AND PRACTICE.

"But such a course is not going to give us the best results, except more or less by accident; and if these are to be tried for we *must* make up our minds what sort of negative we want. My own preference is for one that is too hard for bromide enlarging. I will deal with how to get it later on. Such a negative I develop to get as good a platinum print as can be made, if anything erring on the bright side, so that the negative is suitable for carbon also. It will print, as a rule, very well on rapid bromide paper, provided it is not too vigorous, but as I never make direct prints on bromide this does not enter into my considera-

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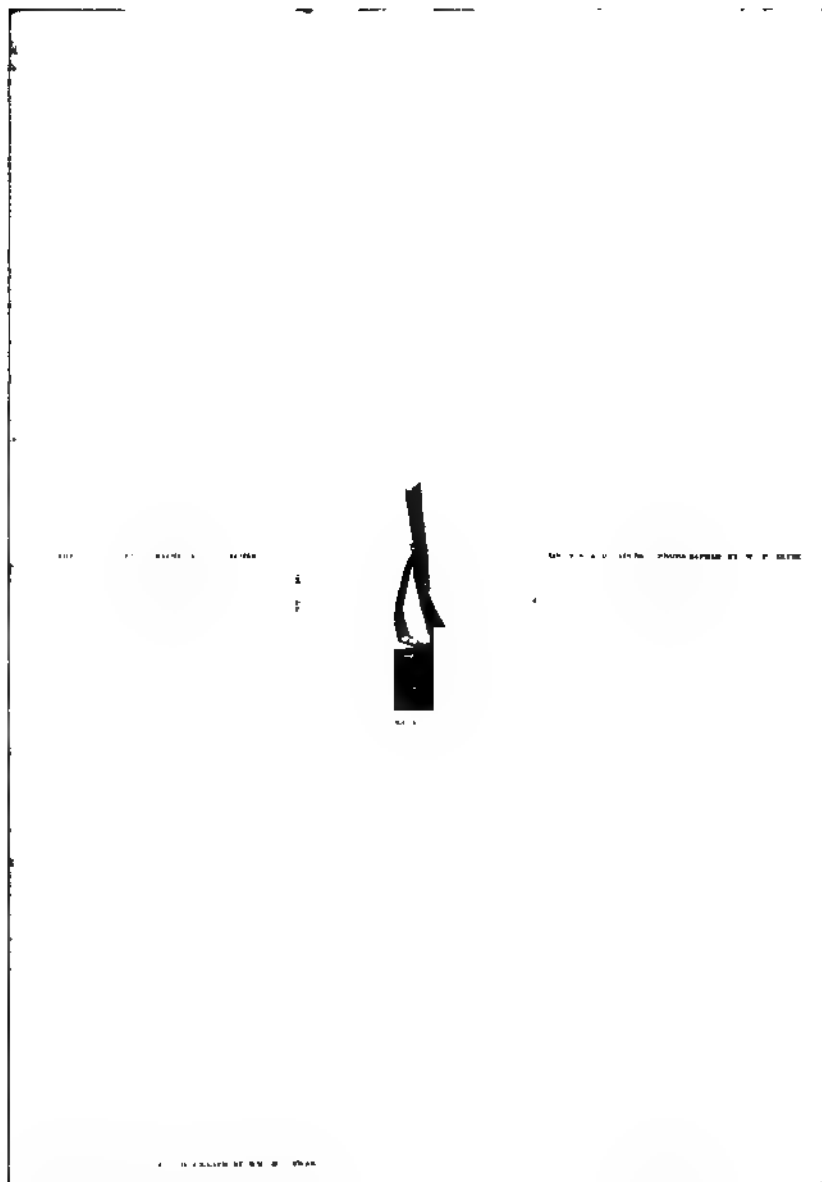
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A CHOPIN SCHERZO

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Sam'l A. Martin



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OVER THE HILLS

Pittsburg Photographic Society Exhibition

R. D. Bruce

UP THE YONCH

Pittsburg Photographic Society Exhibition

Wm. McK. Ewart

tion. If it is worth enlarging at all, it should be worth taking a little trouble over. By this I mean making a carbon transparency (which such a negative gives to perfection), making from that an enlarged negative, which in its turn can be made so as to print in platinum, carbon, or gum. Such a negative also gives a capital warm-toned lantern slide.

"SOFT DIRECT ENLARGEMENTS ARE POSSIBLE.

"If, as sometimes happens, I want a bromide enlargement, if the negative is not very vigorous, I can get one that is soft enough by enlarging with bolting silk close to the bromide paper, while sulphur toning also

Woodland

Ch. W. Davis

Pittsburg Exhibition

greatly helps to lessen the harshness. If neither of these is sufficient, then Mr. Sterry's chromic acid process will give me any degree of softness I require, but this usually means making several enlargements before I get exactly what I want. On one or two occasions I have reduced a negative before enlarging, but this is not a course which commends itself, unless the negative is not wanted for direct printing afterwards.

"TEMPORARY REDUCTION FOR ENLARGING.

"For experimental purposes, I once tried a plan which succeeded very well, though I have never felt inclined to repeat it. I had a negative from which I wanted an enlargement on bromide paper, but it was much too strong—in fact, it was just the sort of negative I like to have for carbon printing. To see whether it would answer or not, I soaked it for a quarter of an hour in a solution made by

Youth and Age

Wm. McG. White

Pittsburg Exhibition

mixing in equal parts five per cent. copper sulphate and five per cent. potassium bromide solutions. This bleached the image entirely, and the plate was washed, dried, and in this condition gave a soft and quite successful bromide enlargement. It was afterwards developed back to about its original condition in an ordinary metol-hydroquinone developer, washed, dried, and seemed as good as ever. The risk of so much wetting and drying, to say nothing of the chemical treatment, is one, however, to which I should not care to expose a valued negative.

"FOR THOSE WHO USE BROMIDE
CHIEFLY."

"Such is the way in which in my own practice I answer the question which troubles my correspondent. But his case is different from mine, in that he uses bromide paper for con-

The Snow Storm S. A. Martin
Pittsburg Exhibition

tact and wants to enlarge on bromide paper also. If that were my case, then I should certainly try and make negatives which would give me good direct enlargements on bromide paper without further trouble. Such would not give good contact prints on the same paper, but on slow gas-light paper, such as most makers now issue under one name or another, it should give contact prints in every way as good as the enlargements. It must not be forgotten that to get the best result on such paper, we want almost exactly the same kind of negative as we do for enlarging. If we want to make an enlarged negative, we can do so by making the transparency on a dry plate, carbon, of course, being out of the question. From such a transparency we can get an enlarged negative as strong as ever we like so as to be printable either in platinum or in carbon. There is no trouble

Dreams

Saml A. Martin
Pittsburg Exhibition

either in making lantern slides successfully from such a negative. If at any subsequent period we wish to print it by contact by one of the processes which require something stronger, it can be intensified, with silver preferably, for the purpose. But this, presumably, would only be quite exceptional.

"HOW TO GET THE RESULT DESIRED.

"In answering the question, I have kept in view the fact that *the best* and not a makeshift result is what is wanted. The only thing now to consider is how to obtain such a result. It must not be forgotten that this depends simply and solely upon the point to which development is carried. The exposure of the plate determines whether the negative shall or shall not truthfully render the subject by any printing process, and the same exposure is needed for all. The process for which the negative shall be suited is determined in the dark room by the point at which we stop developing. We do so soonest when the negative referred to in the last paragraph is required. If we go on a little longer, we get the compromise negative first mentioned, which will give a passable print by most processes, but the best possible by none (unless it is P.O.P. or platinum, for

which this type by many people who like a bright print would be regarded as ideal). If development is carried farther still, we get a negative such as I myself usually aim at and have already described. If development is carried, either intentionally or inadvertently, still further, we get a negative which is in its then form too vigorous for any ordinary printing process at all. It may be reduced with persulphate, which, if it is not very valuable, is the easiest plan. If it is irreplaceable, it is better to make a carbon transparency from it by contact, and then another carbon negative by contact from the transparency, as this can then be made as soft or as strong as is liked, and there is no risk to the original whatever, nor is there any loss of gradation in the duplicates, only a compression of the scale."

We may add that no matter what kind of negative may be desired, the one thing essential for all is sufficient exposure, and the nearer to correct exposure the better. That being secured, the question of degree of contrast is almost if not altogether dependent on the *time* of development. First a thin negative full of the desired delicate detail, and the longer the action is allowed to continue the greater the contrast.

NOTICE.

All communications intended for the editor should be sent to Dr. John Nicol, Tioga Centre, N. Y.; apparatus or books for review, pictures for criticism or for the Monthly Competition. All pictures must have the name and address of the sender on the back, and marked for the "Portfolio," or "For Competition." Original articles are also solicited and the reports of the doings of the Camera Clubs by their Secretaries.

MEMORIES

Pittsburg Photographic Society Exhibition

Sam'l A. Martin

APPARATUS FOR CORRECTING DISTORTIONS IN LANTERN-SLIDE MAKING.

BY DR. CHARLES FORBES.

THE apparatus illustrative of this article was devised by myself and is being used successfully in the photographic laboratory of the University in making lantern slides and window transparencies which are free from distortions produced in the negative by tilting the camera and also from those due to exaggerated perspective.

The apparatus, as represented in

posed of four sixteen candle power incandescent electric lamps; one being placed in each of the four front corners of the box. The interior of the box may be painted white or a reflector of white cardboard bent in a semi-cylindrical form may be placed in the back of the box. Thus it will be seen that all of the light that passes through the negative is reflected from the white surfaces; thereby securing

the accompanying illustration, may be divided into two parts: first, the support for holding and illuminating the negative; second, the camera for making the lantern slide or transparency; both of which are supported on a slotted base along which they may be moved for proper focal adjustment.

The negative supporting part of the apparatus consists of a framework for holding the kits for the various sized negatives. This framework has a special support in which it has two sliding motions; one vertical and the other horizontal for centering the negative. Attached to the back of this framework is a box enclosing the illuminant, which in this case is com-

an even illumination. When the electric lights are not conveniently available the Welsbach light is an excellent substitute. Two of these lights are needed; one on each side of the box placed as near the front as possible. The negative supporting and illuminating parts are themselves supported in such a manner that there are two rotary motions; one on a horizontal and the other on a vertical axis, which when the negative is properly centered pass through its center or the optical axis of the entire apparatus. An inspection of the illustration will show how these two motions are accomplished.

The camera portion of the appa-

tus may consist of any camera having a vertical swing back. It is to be supported at a height above the base that brings the lens on a line with the center of the negative. The camera is also supported so that it has a rotary motion on its optical axis; a convenient arrangement for securing the image on the ground glass in a vertical position.

tive and ground glass thereby have the optical axis of the entire apparatus at right angles to and passing through their respective centers. The exposure is made in the ordinary way. Second, it is frequently the case that a negative is not free from distortions. These may be occasioned in two ways; one, by not having the camera level and the ground glass

THE TOP OF THE HILL

Pittsburg Photographic Society Exhibition

Chas. W. Davis

The working of the apparatus is as follows: First, when a negative is used that is free from all distortions the making of the lantern slide or transparency is reduced to the simplest conditions. The negative is placed in the negative holder of the apparatus in the upright position and properly centered. The camera is adjusted at the necessary distance to secure a positive the desired size. The swing back of the camera is also to be in the upright position. The nega-

in the upright position when making the negative. Thus if the camera be tilted upwards, upright lines of buildings will appear as upwardly converging lines in the photograph, and when tilted downwards an opposite convergence will appear. The correction of this form of distortion is accomplished as follows: The negative, say with vertical lines converging upwards is placed in the negative holder right side up. The holder is now tilted forward as represented

Showing Distortion

in the illustration by a slight rotation on the horizontal axis. This alone is sufficient to render the vertical lines parallel on the ground glass, when the swing back is in the vertical position. At this stage two difficulties are encountered; first, the height of the image is shorter in proportion than it ought to be; and second, it is found impossible to secure a clearly defined focus over the entire picture. Both these difficulties are happily overcome by tilting the camera swing back forward. It will be understood that when the swing back is used the negative holder is not tilted so far. The work of proper corrections is therefore the combined action of the swing back and the negative holder.

The graduated arcs on the negative holder and the camera and the scale on the slotted base are convenient for making records of positions for use in future work.

In connection with this method of distortion correction two lantern slides are shown of Columbia University library building, both made from the same negative; one of which was made in the ordinary way uncorrected and the other corrected.

Under certain conditions the ap-

paratus is adapted to correct perspective exaggerations, which are often noticeable in photographs made with wide angled lenses or when the position of the object photographed is such that one portion of it is too near the camera. In this case the negative is placed in the negative holder with its horizontal diameter in the upright position. The adjustment of the apparatus is similar to the preceding. The portion of the negative that is to be proportionately enlarged is that which is to be tilted toward the camera.

The apparatus is so arranged that the negative may be placed in its support in the horizontal position and the adjustments made by turning the negative holder on its vertical axis. This would necessitate, for the best results, a combination with the lateral swing back of the camera.

It is quite evident that when both forms of distortion occur in the same negative, the corrections may be made by combining both methods of correction, using both of the rotations on the horizontal and vertical axis of the negative holder and the vertical and lateral swings of the camera swing back.

Distortion Corrected

WORDS FROM THE WATCH-TOWER.

BY WATCHMAN.

AMERICANS, in speaking of "process" or half-tone engraving, have long claimed superiority for American productions and will be not a little surprised to hear what William Gamble has to say about it. Mr. Gamble is recognized as one of Great Britain's foremost experts in process work, and recently visited America to see what our engravers were doing, and the following is a sample of two lengthy articles on the subject in *The British Journal of Photography*:

"American process methods do not differ very much from European practice in a general way, and anyone making a tour of inspection round an American photo-engraving shop will be disappointed if it is expected that anything very wonderful will be seen. Here in England, and also on the Continent, we work processes which we originally derived from America, and we employ American-made screens and machinery to a large extent. Such difference as now exists between English and American shops lies, for the most part, in the fact that whereas American workers have changed very little the methods we learnt from them ten years ago, European workers have elaborated both the processes and the apparatus.

"The majority of American photo-engravers seem to know very little of what is going on outside their own country, for they read very little about their craft. As one of their own writ-

ers puts it, 'The rank and file, 95 per cent. of them, never think of reading anything technical regarding process work; they simply "plug" along from day to day in a purely mechanical way, grinding out their quota of work without thought as to why or what, and with only a mind for quitting-time or pay-day. Once out of the shop, process is out of mind, and the days slip by without improvement. In a business so full of possibilities, the great bulk of workers are but day laborers, bricklayers, and hod-carriers.' The employer is, perhaps, equally to blame. In a great many firms the principals are men who have not worked practically in the business, and only know the technical part in a general way. Work has to be got out so quickly, and competition is so keen, that there is no time to experiment with new processes. Certain processes have been found to yield uniform results, and everyone else uses the same, so there is no thought of changing. There is hardly any originality displayed in the equipment and lay-out of the shops, and they are apparently pretty much the same as they have been at any time during the past ten years, except that they have grown larger, and the plant has been duplicated. After you have been shown through one or two representative shops you find little to interest you in the others, as they are all so absolutely alike.

"I certainly did not see in American photo-engraving shops any evidences of that extreme eagerness to

'scrap' old plant when it has obviously become worn out or obsolete, as we have so often heard is the regular practice on the other side. If it were so there would have to be a very complete "clean out" in the majority of the photo-engraving studios in the United States. The cameras and stands were for the most part of a rickety, even ramshackle, description, and often the operator has to stick wedges in badly fitting parts to insure some degree of parallelism. The American operator, or his employer, does not seem able to get away from the idea that the camera is only a 'box,' and 'any old thing' will do so long as you have a decent lens, forgetting that all the good qualities of the expensive lens are neutralized by the imperfections of the camera and stand. The latter is generally of a cheap and flimsy construction, roughly put together, with no pretensions to accuracy. Frequently I hear, 'We buy the "lumber," and have it put together by a carpenter on the premises when the studio is being fitted up.' When the stand begins to show signs of decrepitude, as a good many of them already do, it is 'fixed up' with wire nails and bits of string. The dark slide, or plate holder, as it is called, is usually of the pattern in which the screen is carried along with the plate. If it has a screen-distancing mechanism, it is generally a poor makeshift, and so clogged up and rotted with silver nitrate solution that it is impossible to move it. There is just beginning a tendency to adopt the European plan of holding the screen in an adjustable mechanism at the back of the camera, and there are two or three American-made cameras which somewhat distantly resemble Eu-

ropean ones. The American makers do not, however, seem to be able to get away from the idea that a process camera must be cheap to be acceptable to American firms, and the result is that they cannot afford to produce a camera with any degree of accuracy or durability. I am afraid such cameras give the operators a very unfavorable opinion of the European plan of process camera construction. To import European cameras is, however, out of the question on account of the high initial cost, the expense of shipment, and heavy duty, amounting, I believe, to 45 per cent. of the value."

There is usually a reason for everything. Mr. Gamble, I understand, is in the employment of Penrose & Co., the largest dealers and manufacturers of process apparatus and material in Britain; and in another page of the journal from which the above was clipped it is more than hinted that Penrose & Co. are about to establish a branch of their business in New York.

* * *

Surely there is need for more education amongst amateurs generally, not so much in the words, theory and practice of photography as in the ability to distinguish between a good and a bad photograph, between under and over exposure, etc., etc., etc. One, writing in *The British Journal*, says that he recently exposed a lot of medium speed plates on the sea and shipping, with F/16 and at 1-100 of a second, and that all were failures from over-exposure. With proper development, they might have been failures from under, but most certainly not over exposure, or else the medium speeds of British-made plates are very

much faster than the fastest of plates made in America.

* * *

Hear what an Englishman says in the *B. J. of Art* in London: "London is by common consent amongst artists (French, German, English, or

Italian) the most important, refined international art center of the world." He is writing of painted backgrounds, abusing those painted in America and praising those made in London, hence the laudation; but those who have seen both will hardly agree with him.

NOTES.

IVES' REPLICA GRATINGS.—Having already noticed these grating replicas, which we believe, for some purposes, to be as good as the more costly Rowland's originals, the following letter clipped from *The Photographic Journal* will interest some of our readers: "*To the Editor of The Photographic Journal.*

"DEAR SIR—Referring to the subject of Mr. Newton's demonstration at your meeting of June 13th, permit me to say, in further answer to questions raised by Mr. Mees (p. 241 of *The Photographic Journal*), that in saying that Thorp process grating replicas are 'good enough for some purposes,' I had reference to work calling for little more than clear resolution of the sodium line, as shown by Mr. Newton in his demonstration. This is a very crude test in comparison with what the new process replicas will bear. I undertake to show seven lines between D^1 D^2 in the solar spectrum, under favorable atmospheric conditions, with a 1-inch replica, and they are 'passed' with a power of 20 times, on the E b group, showing a certain strong line about half-way between E and b, second order spectrum, as a clean triplet. I have marked this line in a photograph which I enclose,*

made with a 1-inch replica in a Brown-ing Student spectroscope.

"The 'scattering' of light to which I referred in my paper is quite distinct from that which may arise from raggedness of line in the original ruling, with which I am familiar. I had reference to a much less general scattering, due to distortions in the replicas made with celluloid and mounted face outward. This scattering is in effect more like that due to spherical aberration in an objective, making the black lines of the solar spectrum appear somewhat dim and fuzzy. I believe the best replicas made by Thorp's process show this defect under high eyepiercing and very offensively in the second order spectra.

"The new process replica casts are put face down on the glass and dried out under pressure, leaving the lines as air spaces. Tested at this stage, they may be better than Thorp process replica, because the plane of the diffracting surface is not distorted by the inevitable slight irregularities in the thickness of the cast; but they are immensely improved by leveling up these irregularities of thickness by a balsam filling of the same refractive index as the cast, under a plane cover glass. The protection from injury by

* The line referred to is clearly shown *triple* in the photograph, and the definition of the lines generally seems very good.—ED.

cover glass I regard as a matter of secondary importance in comparison with the fact that the resolving and defining power of the new replicas compares well with that of original Rowland gratings, even when used at full aperture for second order spectra, with high eyepiercing.

"Yours, etc.,

"FREDERIC E. IVES."

PORTRAITS IN NATURAL COLORS.

We notice in one of our German contemporaries the announcement that a studio has been opened in Berlin specially for photographs in natural colors on paper. The studio is about fifteen yards long and five and a half yards wide, and is fitted with ribbed glass windows and roof. About six feet of the roof and side glass is movable, thus giving a brilliant and open-air lighting, and also doing away with any loss of light by the absorption of the glass. The camera is fitted with a repeating back for the three exposures, and the color filters are placed just in front of the plate. The printing process adopted is that of superimposed carbon tissues, in, of course, the correct colors—red, yellow, and blue—the same as are placed on the market here by the Rotary Photographic Company. Not only portraiture, but the reproduction of oil paintings and other colored objects will be undertaken, and special arrangements have been made to give instructions in the process. We should think that what is possible in Berlin might also be possible in the larger cities of America, and at the prices charged, \$12 for two cabinets, should pay fairly well, although the kind of people that would pay that would not object to paying \$10 for each.

PHOTOGRAPHING NEAR FORTS.—We are glad to say that Dr. Franklin Clarke, of Boston, a graduate of Harvard, whose arrest in Jamaica while photographing the forts at Port Royal, Kingston, has, after considerable delay and undergoing a jury trial, been acquitted, but by a kind of not-guilty-but-don't-do-it-again verdict. Amateur photographers cannot be too careful when using their cameras anywhere near forts. Just why those clothed with a little authority, especially when in any way connected with militarism, are so much afraid of the camera, is not quite clear; but so they are, and as they have the power to bring trouble it is better to keep out of their way.

BORIC ACID AS A RESTRAINER.—

Prof. Namias, in the *Revue Suisse*, has been advocating the use of boric acid as a remedy for over-exposure. He describes it as being much better used in a hydrokinone developer, which contains a very little metol. This, he states, is as metol starts the action which the hydrokinone in the presence of a very little alkali can continue, but cannot commence. The following is the formula he recommends:

Hydrokinone	3½ grains
Metol	½ grain
Sodium carbonate (crystals) ..	30 grains
Sodium sulphite (crystals)	15 grains
Water	1 ounce

In such a formula the alkali can be neutralized entirely by the addition of an acid, but most acids are too violent in such a case. Boric acid, however, can exercise a marked restraining action without decomposing either the carbonate or the sulphite. In or-

der to increase its solubility, it is dissolved in the ordinary ten per cent. solution of potassium bromide, a saturated solution of boric acid therein being prepared. Such a restrainer acts very differently from bromide by itself, and if added in a sufficient quantity will stop development altogether. A plate that has been exposed forty times as long as necessary can be de-

veloped, he recommends, in the above solution, to which has been added one-tenth of its bulk of the saturated solution of boric acid just described. Namias also points out that boric acid may be used instead of sodium sulphite or bisulphite in the preparation of acid fixing baths. So made up, they keep colorless, he observes, for a very long time.

A PLEA FOR GOOD TASTE AND COMMON SENSE.

BY SIDNEY ALLAN. (SADAKICHI HARTMANN.)

[The following is the only authorized and complete verbatim report of Mr. Hartmann's lecture as delivered before the Twenty-fifth Annual Convention of the Photographers' Association of America, Boston, August, 1905. We might add that the lecturer was very frequently applauded, and his address, as a whole, was highly appreciated by a large and attentive audience.—ED.]

LADIES AND GENTLEMEN: Good taste and common sense are two qualities which, I believe, all of us regard as desirable possessions, but which are by no means as frequently met with as their popularity would indicate. To the photographer they should be especially valuable as I will readily prove to you. There are two sides to the profession: First, the all-important business side, and second, the so-called artistic consideration. If a photographer would show common sense in all his business undertakings, and good taste in all the work that leaves his studio, he would be nothing short of an ideal professional. I would not be astonished in the least, if I were informed that quite a number of you had reached this state of perfection, and if by chance any such should be present, I would feel like asking for their indulgence while I deliver my lecture to the less fortunate ones.

But perfection or no perfection, I must confess I have been greatly perturbed of late—almost as much as the profession itself—by the peculiar desire of the professional photographer to be considered an artist. Isn't this betraying a slight lack of common sense? I asked myself; and then the peculiar, steadily growing tendency in recent years to make tone the principal factor in the make-up of a photographic por-

trait. Isn't that showing a slight diversion from good taste? I asked myself.

Several months ago it was announced that the long-contemplated marriage between photography and art has been indefinitely postponed and much through my intervention. Now that puts me in a rather bad light, doesn't it? Meddling with the tender affections of two parties that are supposed to be devoted to each other. But alas, I am a very much abused person. Whatever statement I may make, there are always some people who wilfully misinterpret what I am saying. If I say a thing is black, they assert that I have said it is white.

I am only guilty of having drawn a line of distinction between pictorial studies and professional portraits. And it is not merely one man's opinion. A critic that amounts to anything at all never represents one man's opinions but rather the varied opinions of people that he has come in contact with.

I have said that pictorial photography whose sole aim is to render the photographic print artistic—no matter whether made by an amateur or a professional—that pictorial photography, although not yet recognized as an art, may eventually be considered one. But this will not be accomplished by hanging some photographs

in an art exhibition, but only by their own artistic value. At present the extreme pretendists are in my opinion entirely in the wrong, and the professionals in a way nearer the goal than they.

In regard to professional portrait photography, whose aim is undeniably a practical one, filling a public necessity, I have said that it cannot be art. It might be considered one, if the conditions were different. But as things are at present within our community as it is to-day, strictly material, purse-proud, in a process of evolution, in which all higher qualities have but a minimum chance for development, it is impossible it would not be regarded one, even if it were one.

The photographer does not decide that question; no single man can do it, neither the critics nor do the artists, although they have something to say in the matter, but the public.

Now, how does the public regard photography? You all know I have found that the large majority of the intelligent public still lives in complete ignorance of the pictorial print. It even does not know of its existence. There is an occasional exhibition, but what does that signify?

At the Secession Exhibition, at Pittsburgh, I overheard Mr. Heinz, the pickle man, say to one of the exhibitors who was fluttering around him, "Ah, I see what you are driving at. You make things look antique. You are an impressionist."

The art dealer runs shy of the pictorial print. Which one of the prominent art dealers in New York handles artistic photographs? There are as yet no patrons who collect photographic prints, as they do etchings, engravings, etc. It is therefore no exaggeration to assert that the public takes no interest in these endeavors, for the only appreciation of the public that means something is when it likes a thing well enough to buy it—in other words, when the public becomes a purchaser.

Professional portrait photography, on the other hand, is on the highway of popularity, but it is regarded strictly as a utilitarian article. And there is no denying it is a utilitarian article.

Now you must know how difficult it is to hammer into the head of the public a utilitarian article. The silversmith, the de-

signers of jewelry, the makers of furniture, all craftsmen—and not only in this country—work under the same difficulty as you do. And yet it goes without saying every true craftsman has faculties far superior to that of the ordinary workman. But the public, or rather Western civilization, has rather a peculiar notion about this. They only care for comfort and utility in such things. The artist's standard is another one, and, as it is invariably higher than that of the public, a continual friction arises. But the public is more powerful than the individual worker, it usually wins its battles, its demands are satisfied.

There have been times when this was different and there are countries even now where it is not the case. Every traveler returning from the Orient tells us how much more picturesquely the people live in those countries. Everywhere in India, in Siam, in China, in Japan, you will find that the environment is more artistic, and it extends to the smallest details, not only to the furniture and the things they wear, but to the ware they eat from, and the manifold utensils that are used even in a primitive household. In Japan you can see the coolies in the street discussing the merit of a colored print. I do not believe our hack-drivers indulge in such pastimes, nor do our servant-girls read Spencer, as they are said to do in the Land of the Rising Sun.

This does not necessarily show a higher stage of culture. For if you look in these countries for great works of art, like a Rembrandt, for instance, you will look in vain. It perhaps even shows that they are more material than we are, caring more for bodily comfort than an art which only affects the higher faculties.

We, on the other hand, have made art entirely too exclusive. We regard it as something abstract. It must have no purpose further than to serve as an ornamentation, like a painting or marble statue, and our artists generally feel ashamed of painting a decoration for a piano, or make the design for a piece of bric-a-brac.

We argue in this fashion: That which the multitude admires is said to be confined to the ignoble. In other words, whatever is popular must needs, *per se*, be so far commonplace that most people are fitted to appreciate it. The commonplace is, of course,

the antithesis of the distinguished; hence, it is argued, popularity in the arts is significant of a mean attainment.

And that is perhaps the principal reason why I think professional portrait photography will never be ranked as an art. But there are other reasons. Art is largely a matter of temperament. I do not doubt for a moment that the photographer possesses a good share of it, but he cannot allow it full play. As long as a second party, and very often a third or fourth or fifth party, in the persons of all-powerful relatives, have something to say in the matter, he cannot live up to any art theories he might have. It is quite a different matter whether a painter sits comfortably in his studio and paints a picture to suit his own fancy or whether he makes a design for some commercial matter. It is quite a different matter whether a writer describes a fire in one of the chapters of his novel or whether he is sent out to make a hasty report of an actual fire. He has to make sacrifices. And so has the photographer.

Why, otherwise, whenever one runs across a truly artistic print in a photographic studio, would the photographer excuse himself by saying, "I wouldn't allow myself that with every one," or "That's a piece of work I made for myself."

There's the whole of my argument in a nut-shell. Art is made to please the artist first of all, to convey his idea, if he wants it to be conveyed, as he knows it is best, without any consideration for immediate popular success. He can afford, or rather chooses, to wait. And that is just what the photographer cannot do. He is absolutely in need of immediate popular success.

Business and art are a team of horses that pull together very badly. One is sure to try to gallop away from the other. But there is a great difference in which one it is. If it be art that pulls into a sleepy half trot, people will say, "Well, he is after all a good business man." But if it be business, people will have no excuse for him; he will be obliged to close up his shop.

I must confess I do not comprehend why the photographer is so determined to be called an artist. The term "artist" is nothing to be particularly proud of in these days of artistic beard-trimming, vaudeville and loop-the-loop artists. There was a time

when all Americans were colonels or judges, but now they all want to become professors or artists. And yet it is my experience that nearly all painters and sculptors of repute prefer to call themselves simply painters or sculptors. The term artist is rather tabooed. Why should not the photographer be satisfied to proudly call himself that what he is, a photographer?

Photography can stand on its own legs—or rather lower limbs, to use a Boston term. It does not need to lean for support on any other profession, art, or whatever it may be.

And would you enjoy the bill of fare that most artists are satisfied with? I have the pleasure to know 400 or 500 painters and sculptors, personally, and I know as a fact, or rather as an experience, that seventy-five per cent. of them cannot afford three square meals a day. The artist in America does not sleep on a bed of roses. He is chronically hard up. Even if he makes money his financial condition is in a deplorable state. He is an exceedingly bad manager of his own affairs. Surely you do not aspire to that doubtful distinction. It's pretty tough at times, I can tell you. Try your hands at writing poetry for a while and you'll find out.

This desire for the honorary title of artist, isn't it after all only a matter of vanity? They want their prints to elicit the remark, "It is not like a photograph, but much more like a picture." But it seems to me that if a photographic print is really good only one question is of vital interest.

If a picture affects me with a special and unique impression of pleasure, I care little whether it is a chromo-lithograph or a painting, a photographic print or an etching. What is this Strauss or Stein, this Garo or Pierce print to me? What effects does it really produce on me? Does it give me an esthetic pleasure? And if so, what sort of degree of pleasure? Does it satisfy me as much as an etching or a lithograph? The answers to these questions are the aim of all true criticism; to know one's own impression as it really is, is the only criticism that is valuable in photography. It is at such moment absolutely futile to trouble oneself whether a photographic print is a work of art, or what the exact relation of photography is to other arts.

All this talk about art, nevertheless,

makes the photographers feel a little bit ashamed of the profession; they no longer feel any particular pride in its association and would like to find some means to conceal its mechanical methods.

They see some of the extreme pictorialists, who in their eyes after all are nothing but amateurs, open studios, charge exorbitant prices, strut about in grand style, proclaiming that their work is the best that ever was, and all because they are artists. Naturally, the professionals do not want to be left in the cold. But what does all this amount to? It may appeal to a certain class of people with fastidious tastes, but they represent an exceedingly small fraction of the large masses of the public whose tastes are of a more normal and practical bent. And of course every owner of a gallery has his own clientele. Of course I do not mean to convey that there is nothing to admire in these extreme pictorialists. Many of their prints may be enjoyed for their decorative value, for certain beauties and qualities they display.

I am even of the opinion that the professionals as a body are apt to underrate the value of the amateur, largely because his work is so absolutely futile and unpractical. But we should not forget that he can afford to work more unselfishly, that he can suit his own fads and fancies, that he can devote all his time to experiments and the solving of pictorial problems. And in this way he has done a vast amount of good. It was he who has assisted in working out the artistic possibilities of photography, and there is no doubt that he has helped to raise its æsthetic standard.

But the extreme pictorialists of to-day are going entirely too far. They may represent merely a transition period, the necessary step from one phase to another, but I frankly believe they have done more harm than good. I have been associated with these men for years, and I know them as sincere workers endowed with great talent and abundant enthusiasm, but I cannot help thinking and I have told them so—eight or ten years ago—that they were and now are on the wrong track.

But because they went on the wrong track, that is no reason why you should go there too. There is still time to pull the switch and wave the danger signals. There

was a time when the professionals and the pictorialists might have got along fairly well with each other. That was before the era of excessive hand manipulation, and the striving for painter-like effect.

You may recall the poem of Miss Jean Ingelow, which described how a lover and his lass, in merry mood, took hands across a little rill which meandered through fields, and strolled along its banks until the rill widened into a streamlet, so that they had perforce to loosen hands; and even as they walked the stream grew larger, separating them further and further, until, towards its mouth, it became so broad that the twain were lost to each other's sight.

That is what has happened to the pictorialists and professionals. They are entirely cut off from each other. They have become perfect aliens to each other, and there is no use of building a bridge or finding a boat to bring them together again. Let them stay at the other side of the river and pursue their path. It was after all a misapplied affection. You cannot get along without pictorialism but you can get along without extreme pictorialism.

A photographic print does not need to look as if the negative had been lying at the bottom of the dust bin or as if a cat had been asleep on the wet negative.

A portrait does not need to look like a mezzotint, a morose old master or a Japanese ghost in order to be a good photograph.

A portrait does not need to imitate with wearisome regularity in substance, form, line, mass, and detail the bones of some approved work of art in order to be artistic. There is no sap of life in such work. It is still-born.

The seeking of inspiration in the old masters without utilizing it in an original manner constitutes no creation. Imitation is the most primitive of all human instincts. Even the South Sea Islanders daub their hideous gods with color. No, we cannot recreate the old. We can learn from it, but we cannot reproduce it.

I know my friend Griffith, excellent talker that he is, has told you just the opposite, and I believe more than once. His chariot of thought is always careering in the clouds, where the old masters sit enthroned and he has told you to plagiarize

whatever you can, carry away whole canvasses from the art museum, as long as you make your work more artistic. Bad advice, I fear. Borrowing is no such easy matter. If it were, if pictorial arrangements had simply to be gathered and stuck together, we would all do it.

But why should the photographer imitate? Does he not realize that his medium is powerful enough to be absolutely independent, to create its own new laws of composition? Why, photography has revolutionized the entire art of painting. Where did the impressionists, like Manet and Monet and their numerous followers, learn to sacrifice the whole for a part, if not from the haphazard fragments of Nature as revealed in the finder or in the ground-glass of your camera?

The photographs of galloping horses by Anschutz and Muybridge revealed to the artists a wealth of movement that hitherto had escaped their notice, and I wonder if Raffaelli and other street painters would ever have succeeded in "fixing" the furtive movements of pedestrians and city crowds without the help of the camera. Raffaelli relies entirely in snapshots for the pictorial effects of his pictures, and so did Verestchagin, the Russian war-painter. The peculiar attitudes of Degas' ballet-girls and of his race-track crowds are also of photographic origin. Our mural painters nearly all work from photographs. La Farge, our great American colorists, uses life-size photographic enlargements of draped models for the designs of his stained-glass windows.

And if the illustrators had to study every subject they treat in the old-fashioned manner of making sketches more than one-half would be put out of business. Also the poster designers, trying to see things flat, have profited by the photographic print. And nearly all the portrait painters, even the very best, find photography indispensable. The public has obtained through photography a better idea of likeness than it ever had before, and the portrait painter finds it impossible to compete with this almost intuitive knowledge without numerous photographic studies of his sitters.

But, alas, what photographers strive for, in most instances, is merely a fragmentary accomplishment. It is not truth in the large

sense as the old masters understood it. To Titian and Rembrandt and Velasquez "tone" meant a combination of all pictorial qualities, the contrast of color, the balance of light and darker planes, the line arrangement; all these together produced tone. They did not sacrifice form and detail, correct drawing, the physiognomy of the faces and the idea and conception of the picture to it.

Don't misunderstand me. Tone is desirable; no picture should be without it. But it is merely one of the elements that enters into the making of a picture, and not the whole thing.

What the photographer sees in tone is merely the appearance of old age. The old masters have become famous, and the public has acquired a certain predilection for dark-toned pictures. The modern painters try to reproduce it, overlooking (perhaps wilfully) that the dark tonality is entirely an artificial product, by dirt and dampness, the chemical action of light, and the gradual change of color, oil and varnish.

The old masters painted in a low key, but they probably never thought that some day their pictures would look as they look now. The modern painters try to produce a quality which has nothing to do with art; they cater to the taste of certain art patrons that have a liking for old-looking things. And the photographers have followed in their footsteps.

When Horsley Hinton was in this country he said to me: "This is due to the influence of Whistler, who translated all objects into flat surface planes and in that way sacrificed more to the realization of tone than any other painter." But his more or less fragmentary visions were realized in color, which is quite a different proposition than is monochrome. And I am sure he would never have perpetrated some of those strange concoctions which pass for photographic prints, but which are really nothing but brown scraps of paper reminding one strongly of mock-turtle soup. Strange forms appear on the surface. Perhaps it is veal, and it may be beef, if it is not horse or cat's meat, but the principal thing is after all the brown soup.

Looking at such a picture one does not know what to make of it, and I once heard one exhibitor remark to another: "Your

values are all right, but you have been too lavish with the highlights in your portraits. Look at No. —, for example; you never saw a man's face lit up like that!" The other fellow replied: "My dear fellow, how can you be so blind? That's not a portrait; it's a sunset."

This fad to represent objects not fully modeled, but merely to suggest them, may go in landscape and photography, but it is absolutely out of place in portraiture.

What constitutes a good portrait? A likeness that produces in one characteristic attitude and facial expression as much of the sitter's individuality as is possible in a flat-surface view.

And in such a portrait forms can not be suggested, they must be there; it can not be realized by a dismal monotone tint, in which a part of the face is vaguely suggested. Ordinary human beings do not live in an atmosphere with garish highlights on their nose.

People should be represented under ordinary light conditions, such as they are used to live in. I have frequently talked to men who are supposed to know something about art, who own large collections of paintings, etchings and art objects. They have no use whatever for the so-called esthetic print. And is the case of Pierpont Morgan not the best proof? He refused to pay a secessionist the rather exorbitant price of nine hundred dollars for eighteen prints—they finally came to some agreement—and at the same time gave to Pach a very large order, because he preferred a likeness to an imaginary portrait. The pictorialists had the excuse, what does a man like Pierpont Morgan know? Well, I don't know about that. I know he presented a rotten picture of Napoleon to the Metropolitan Art Museum, but I think he knows as much about art as many of the men who criticize him.

I have found that people of more refined taste are generally in favor of home portraiture. If you go to a clambake, you want to get some clams. A man wants to see his wife as he knows her, in the dress and surroundings in which he is used to see her, and not wrapped in green drapery, sitting on a brass jar. He wants to see his children with the expression on their faces with which he is familiar, and not with

some meaningless and washed-out faces that might as well belong to Mrs. Grundy's children.

But all people agree on one point, they want a likeness. They do not care a rap to know how another man imagines that they look. And they are absolutely in the right. For of what use is a picture that bears no resemblance to one's appearance and looks, that friends, even one's children, do not recognize or laugh at?

I have been photographed by several of these extreme pictorialists, and there is not one among them that I would care to give away. In one I look like an old man of sixty, in another one like a bicycle fiend, in a third like an intimate friend of mine. And a fourth one, that my publisher used on a circular, produced the peculiar result of making me the recipient of half a dozen letters that were invariably addressed Miss or Mrs. Shades of Daguerre! what kind of photography is that where one does not know whether it is a man or a woman that has been portrayed?

For that reason not tonality and other artistic qualities are the most important things in portrait photography, but the rendering of a characteristic pose of the sitter, and the record of a fugitive facial expression. And this does in no way hinder you from showing good taste, ten times more than you have ever shown—but a perfect likeness is the essential thing.

No artist can compete with the camera in expressing the continuous, almost indescribable, changes in a human face, the delicate nuances in the evolution of a smile or any other human sentiment, passion or common every-day expression of routine life. In this domain portrait photography could achieve its greatest triumphs.

We all know that facial expression is changing continually, and that there are really hundreds of likenesses to every face. The photographer must try to fix the most characteristic, or rather give us a composite of a variety of expression. Furthermore, a man looks different to the inner circle of his family than to his friends, and again to the general public. For what special purpose are the pictures wanted? This also should enter into the calculation of the photographer. A man has to be a mighty

good character reader to do so. And it would do no photographer any harm to make a special study of facial expression, the significance of gestures, attitudes and deportments, as the actors do. He should be familiar with physiognomy, a vast study by itself, the divination of character as expressed by the pose of the hands, and the outward appearance and general make-up of the sitter.

For a photographer is continually confronted by people he has never seen before. He cannot get acquainted with them like a painter, who commands numerous sittings. He should know them at the first glance. He has to rely entirely on the spontaneity of his judgment.

You must possess the gift to find something of interest in every person. Do not limit your idea of beauty to the technicalities of the craft, but render the value and beauty of personality. Make the photographic print a real valuable possession, not merely a record but a keepsake, a memento that contains something of the real men and women who are portrayed.

To have the power to comprehend all types of humanity, to grow enthusiastic about them, and to depict them faithfully, subordinating one's flights of fancy to the necessity of the moment, takes a man of keen intelligence and a deep love for humanity. And that is, in my opinion, first of all, necessary to produce a good portrait photographer.

And as for art. Let time settle that. You may not be able to accomplish all you would like to accomplish, but who can!

One day I talked to Augustus St. Gaudens, our great American sculptor whose Shaw Monument stands on the Common here. It was at the time when he made the design for the Chicago World's Fair medal. There had been some objection to one of the nude figures. He had changed it. But the committee demanded further changes. And he calmly set about to make them. I expressed my astonishment that he listened to such criticism instead of flinging medal and all into the face of the committee, as I might have done.

"How can a man of your reputation stand such treatment?" I asked. "Because they may be right, after all," he answered, "and I really believe it greater to produce something artistic that satisfies popular taste than merely my own fancy. An artist must be able to create a work of art from the very midst of the limitations that surround him."

And St. Gaudens was right; the man with an ideal often wastes his whole life without accomplishing anything, while the other man, perhaps with the same yearning in his heart, who merely *tries* to do his best after all *does* some little good. And that is all we can do, each in his sphere according to his ability.

Show as much good taste as you can, but do not forget the common sense. Let every man go as far as he can, and the final result will not be failing. And although some may say very little, it will after all help to improve the taste of the community, its appreciation of form, character and life.

But do not set yourselves up as educators, because photography in itself is an educational force.

The mission of photography is, after all, a democratic one. It answers better than other mediums of pictorial expression the special necessities of a leveling age like ours. Photography is, in my opinion, destined to become the huge, universal record of life and Nature, of buildings, people, types, events, of all activities of modern society. And this is a much greater vocation than narrowing it down to a graphic art and making it solely a medium of individual expression.

Photography is the medium of objective universal expression, and if we should ever get so far that this will be generally recognized and appreciated, when the photographers will be proud to be photographers and fully comprehend the unlimited power and possibilities of their profession, portrait photography, I am convinced, will be more than ever one of the most important and most dignified expressions the pictorial instinct of mankind is possible of.

Secretaries of Societies, or Camera Clubs who want their meetings reported or who have communications of interest to photographers that they wish to have published should send them direct to Dr. John Nicol, Tioga Centre, N. Y.

AKRON CAMERA CLUB.—For the fall and winter season the club has established a series of contests with a view of stimulating members to show good work. The first contest was for lantern slides held on the 10th of this month. Each member of the club entering was required to submit three or more slides, and the best set of three receives the award of a medal.

The same medal is to be awarded in a print competition in November and only remains in the possession of the holder as long as he can successfully defend it. Much interest was manifested in the slide contest. By this means the club expects to be in a position to select a set suitable for use in the American Lantern Slide Interchange this fall.

THE AMERICAN LANTERN SLIDE INTERCHANGE.—The season 1905-6 opened in September last with about twenty-three organizations composing the Interchange and ten different sets of slides in circulation. It is found the sets are of much utility in aiding clubs to maintain interest in their respective localities among their members and friends. The periodical exhibition of pictures representative of work from different sections of the country and of foreign countries also proved most interesting and instructive.

The general manager has issued a call for new sets of slides to be submitted for examination by November 15th next. According to the rules a club is expected to send a set of not less than fifty, or more than one hundred and twenty-five slides, of approved quality. These are examined by a board of managers and by a majority vote each slide is approved or rejected.

The approved slides are bunched together in sets of one hundred or more and are then circulated for exhibition among the clubs. The rejected slides are returned to the several clubs and in a year or so the approved slides after circulation are also returned.

The present board of managers is: F. C. Beach, New York; W. H. Cheney, Orange, N. J.; John P. Zenner, Buffalo, N. Y.; Herbert F. Smith, Syracuse, N. Y.; Henry S. Redfield, Hartford, Conn.

Information can be obtained from F. C. Beach, general manager, 361 Broadway, New York.

**First Annual Exhibition of the Photographic
Section of the Academy of Science and
Art, Pittsburg, Pa.**

This flourishing society held their first annual exhibition from September 15 to 23 in the halls of the East Liberty Branch of the Y. M. C. A. Through the courtesy of Mr. Oscar C. Reiter, treasurer-director, we are permitted to reproduce a few of the pictures. The jury of selection, consisting of Geo. W. Layng, Chas. J. Connick and Geo. W. Sotter, accepted 161 frames from thirty exhibitors, and to judge from the expressions in the local press the show was of no mean order and was largely attended. Judging from the number of entries, the members of the Photographic Section of the Academy must be indefatigable workers and their showing eclipses that of many clubs which have been longer established.

San Francisco Mission Camera Club.

This club, we learn from its secretary, was established in July, with the following

official board: President, Tom Irwin; vice-president, J. C. Billings; recording secretary, W. A. Gill; financial secretary, W. S. Voy, and treasurer, F. C. Russell.

The club rooms, which include all the usual features, are at 2041 Mission Street; and, according to the secretary, the objects of the club are to promote social intercourse and photographic intercommunication between the amateur photographers of both sexes, and to provide the necessary dark, enlarging, and other rooms and apparatus for the joint and single study and practice of the art. We may say that while we write, September 1st, arrangements are in progress for an entertainment and dance to be held this evening, the proceeds of which will be devoted to the improvement and uses of the club. The secretary will be glad to get into communication with the secretaries of other clubs, and may be addressed either to the club rooms or The California School of Mechanical Arts, Sixteenth and Utah streets, San Francisco.

Announcement

To the Chairman of the Lantern Slide Committee.

Now that the vacation season is over we wish to strongly urge the members of your committee to lose no time in preparing lantern slides for the circuit of clubs in the American Federation of Photographic Societies and for competition for the \$100 prize and silver medals. Competition closes December 1st.

These slides should be made with special attention to the suggestions in the "Constitution, Rules, etc.," of the Federation Lantern Slide Committee, a copy of which should be in your possession. Bear this in mind, that interest of subject and artistic merit will count for more in the judging than technique; the latter, however, should not be neglected, and with this in view, we wish to submit the following for your earnest consideration. Good slides from thin and flat negatives can be made with a weak light and some good plate giving a fair amount of contrast—such as Seed's slow; for other negatives we would advise all who have had

any trouble in getting fine results to use *fresh* Paget slow plates and iron developer, a good formula for which is as follows:

STOCK SOLUTION.

No. 1. Oxalate of potash, 1 lb.

Warm water, 48 oz.

Add solution of citric acid to *just* turn litmus paper.

No. 2. Sulphate of iron (best), $\frac{1}{2}$ lb.

Warm water, 24 oz.

15 drops sulphuric acid.

To 5 ounces of No. 1 add 1 ounce of No. 2, also 10 drops 10 per cent. solution bromide for Seed's or 3 drops for Paget slow plates.

Be sure to mix No. 1 and No. 2 by pouring in slowly and stirring well and do not try to keep after so mixed for future use, as it will not act well—make a fresh lot each time.

Don't be afraid of a softly focussed negative for lantern-slide production, for slides made from many negatives of this kind give very pleasing effects. Slides should be tested in an electric arc lantern of about 2,000 candle power, with a projection from lantern to screen of about 30 feet. A firm adherence to this will insure a uniformity in results throughout the different clubs and will be far more satisfactory. Paget plates will give remarkably soft effects, as instanced by the slides put out from Hartford in the last few years. These plates were used in most instances with the iron developer already described.

These remarks are chiefly for those who have not had as good results as they could wish—to others we advise keeping to their present methods—to all, we wish them the best of success and an earnest effort to do their part to make this, the first year of the American Federation Lantern Slide Interchange, a record one.

We invite correspondence on this subject. Cordially yours,

HENRY S. REDFIELD,
Chairman.

CLARENCE M. RODGERS, Secretary,
Lantern Slide Committee, Amer. Fed.,
Box 940, Hartford, Conn.

THE PHOTO-MINIATURE, No. 72, September.—This number deals with "Photography for Profit," and is a new departure and one that our very highly esteemed friend, its editor, will forgive us for saying we do not like. Instead of a complete book by a single writer who had space to treat his subject somewhat exhaustively, this is written by at least six. As a monograph it was unique among journals, while, as it is, it is neither the one thing nor the other, but something between, and something that to us at least is not so good as either. So much for the change, which we hope is only for this once, and now for the matter, such as it is—and it is good so far as it goes; but there was matter enough for a whole number in any one of the phases of the subject dealt with. Our dear friend, Tennant, we feel regarding this, as our old friend, Bailie Brown, of Musselburgh, felt regarding a woman brought before him, "Not guilty, but don't do it again."

* * *

"WITH THE CAMERA," the monthly circular from the Illinois College of Photography, is less interesting than usual, telling as it does only of visits of former students, of the success of several that have opened studios of their own, of the ease with which positions as photo-engravers are obtained by its graduates, and of the constant demand for more; and that it is not all work and no play is evident by the notice that the students are making "great preparations for the annual Coon Hunt."

* * *

"THE PRACTICAL PHOTOGRAPHER" for June seems to have been mislaid or in some way beyond our reach till now, but "better late than never," especially as flower photography, with which it deals, although perhaps the lowest phase of art, gives pleasure and pleasant employment to many.

Mrs. Cadby, who may be said to be *facile*

princeps in England at that work, is the "pictorial worker" selected for special notice, and certainly the eight examples chosen for illustration are highly creditable. The editor, in addition to telling us much that he knows of floral photography, has induced over a dozen others, all more or less well known as experts in it, and as we have said of some other subjects that he has exploited, what is not included in this monograph is hardly worth knowing. The Practical Photographer is always a very good "quarter's worth."

Camera Work.

"CAMERA WORK," No. XII., dated October 1905.—We hardly like to say what we think of this number, lest we should be accused of exaggeration, although exaggeration is hardly possible. As with successions of good things, we have been in the habit of saying that each number was better than its predecessor; but, taken altogether, the twelve numbers form a treasure that is simply priceless; and we feel regarding them as a friend felt regarding his violin when he said that he would sell his coat from his back rather than part with it.

This may be called a Stieglitz number, as it contains no less than ten of his pictures, eight photogravures and two half-tones; and, as the date of production is placed after each title, an opportunity is given for "analytic comparison." It also contains two photogravures and one half-tone from the work of F. Benedict Herzog, the two portraits being of a very high order of merit. Altogether the illustrations are, to a lover of art, worth many, very many times the cost of the number. We may add that one of them, Herzog's "The Story of Isolde," is in the Royal Exhibition priced at \$500.

Nor is the reading matter far behind. C. H. Caffin, in "Of Verities and Illusions," makes a strong plea for the spiritual rather

than the material, which is well worth careful study; and Roland Rood, in "The Evolution of Art from Writing to Photography," gives us a readable if not quite convincing article; although there is perhaps more in the influence of heredity than some are disposed to admit.

The number also contains an "Announcement" in the shape of a prospectus for 1906. We can safely say that from nothing that six or even three times six dollars can buy can so much pleasure be derived.

From the prospectus we make the following extract:

Camera Work has been before the public for three years, twelve numbers having been issued, and during that period its position as the leading exponent of modern pictorial photography throughout the world has been established beyond dispute.

PROSPECTUS FOR 1906.

Number XIII will be devoted to the work of the founders of the Viennese School—Messrs. Kuhn, Henneberg, and Watzek—and will contain twelve gravure proofs on Japan tissue, the plates of which were made in Europe under the personal supervision of Mr. Heinrich Kuhn and printed in New York under our own eyes. In addition to the gravures a number of half-tone illustrations will be included.

Number XIV will be devoted to the recent work of Mr. Eduard J. Steichen. About twelve plates, including several examples of his interesting color-printing and color-photography, are to appear in it. The pictures will embrace some of Mr. Steichen's series of distinguished men and women, as also nudes, landscapes, etc., etc.

Numbers XV and XVI will contain pictures by Joseph T. Keiley, George H. Seeley, Alvin Langdon Coburn, Frank Eugene, Sarah C. Sears, William B. Dyer and a number of others.

REGULAR SUBSCRIPTION PRICE.

The subscription price of the regular issue of Camera Work is six dollars a year for America and six dollars and fifty cents for all foreign countries. Subscriptions at that price begin with current numbers. Single copies will cost

three dollars upward, and all back numbers are at a premium. We earnestly advise that subscribers remit an extra fifty cents with the price of their subscriptions to pay for extra packing and registering, as we assume no responsibility after the magazine has left our hands. Registering and packing ensures safe delivery. Sample copies, \$3.00 each. Back numbers are scarce. Prices quoted at request.

CAMERA WORK SUPPLEMENT.

Supplementary to the regular edition of Number XV we have in preparation a series of additional plates, the work of Mr. Steichen, not heretofore published, which we shall issue simultaneously with that number.

This supplement will contain about twelve to fifteen of these additional plates. Most of the photogravures are made from glass positives specially prepared for this edition by Mr. Steichen himself.

The year's subscription for Numbers XIII, XIV, XV and XVI, and the supplement, together with the registering and packing of all the issues, will be ten dollars.

To non-subscribers, and for extra copies of the Supplement, the price will be five dollars up to the date of publication.

All remittances, orders, etc., should be addressed to Mr. Alfred Stieglitz, 1111 Madison avenue, New York, N. Y.

Davis & Eickemeyer.

Mr. Rudolf Eickemeyer, Jr., who has for some years been manager of the "Campbell Studio," at 564 Fifth avenue, New York, and who has won a world-wide reputation for artistic and beautiful work, has purchased a half interest in this studio, and on December 1st the name of Davis & Sanford will be changed to DAVIS & EICKEMEYER.

As will be seen from the above announcement, Charles H. Davis, of Davis & Sanford fame, and Rudolf Eickemeyer, Jr., the achiever of so many pictorial triumphs, have joined hands and will be known to the public as "Davis & Eickemeyer." The general opinion in photographic circles is that they will make a very strong combination. They have both an established reputation, and in

their portraiture have walked on similar lines. They are both believers in straight photography and have but little patience with the impracticable whims of extreme pictorialism.

Mr. Sanford's interest in the business ceased nearly four years ago, Mr. Davis becoming sole owner.

If you would ask artists of the reputation of a Fred Dielman, Kenyon Cox, F. D. Millet or J. W. Alexander what style of portrait photography they like best of all, they would answer without exception, that of Charles H. Davis, of Davis & Sanford. Even Thomas Moran, the famous painter of the Rocky Mountains and Venice, wrote Mr. Davis: "My portrait leaves nothing to be desired, in fact is perfect."

A studio which has done so much and has done it so well may be reasonably looked to to do still more. Art is continually progressing, and there is such a vast amount of work to be performed in the Davis & Sanford studio, that Mr. Davis, who has been alone for four years, was very wise in inviting a confrere of such consummate skill as Mr. R. Eickemeyer, Jr., to share his future triumphs. Mr. Eickemeyer was the one man in the photographic field who could assist in the future success of this world-famous studio. Under the leadership of these two men it will produce work that may even excel the superb efforts of former years, and under its new name, "Davis & Eickemeyer," augment upon the international reputation which it has gained by sheer superiority.

Aristo Gold (Self-Toning) Paper.

It is not often that we lay particular stress on the all around advantages of any one particular printing paper, there are so many, and each adapted more particularly to certain kinds of work. There must be several desirous features in a printing paper to make it popular. It should be easy to work, certain and constant in its results, pleasing in tone, keeping well before use and an assurance of permanence in the finished print. Aristo Gold Paper combines all these advantages and more. It is a print-out paper (the depth of the finished print can be easily gauged); the emulsion contains the necessary amount of gold to tone the image and render it permanent (doing away with the separate toning process and risk of waste); it has a collodion base, the prints do not stick to everything like a gelatine print and they can be dried instantly by heat or between blotters. Some collodion papers curl most annoyingly in the handling, but this is only very slightly noticed in Aristo Gold Paper. The curling also can be done away with by pouring off the first bath of salt and water from the prints and leaving them for some time clinging in a flat and moistened condition to the bottom of the tray. The directions with the paper are simple, but should be followed exactly to get the best results. All told, it is one of the best and most serviceable papers on the market and considering the minimum of trouble and loss, one of the cheapest.

2026. F. M. GRANT.—"The Willows" puzzles us to know why it was sent, as it must be as evident to you as to us that it is simply a waste of material. A big, black mass with a few grey specks on one side, a grey and black mass with a perfectly black leafless tree on the other, and between, above and below what should have

been sky and road nothing but masses of white paper. The exposure of the negative has been far too short and the development far too long.

2027. J. A. GRANT.—"In the Hayfield." The placing and point of view might have been much better; indeed, there is hardly anything in the print that might not have

No. 1027

IN THE HAYFIELD

John A. Grant

No. 2039

A BEND IN THE RIVER

John Roeschlaub

been better. The horses and hay wagon occupy the whole of the space except half an inch at one side and one inch at the other, instead of about half the space, and being taken straight on we know that there is a pair of horses only by seeing the end of the pole. Then, the attention is divided between the group of children and the men loading the hay and should have been left out, as you may see by covering them with your hand. Again, farmers do not generally carry on their work in the hayfield at night, and only at night could almost everything in the photograph be so black. Your aim in this has evidently been a record of fact, a reproduction of nature as it is, and for that a much longer exposure was essential. Try again when you get the chance; go further away so as to make the horses and wagon occupy not more than, say, half the space; don't divide the attention between two or more groups; that is, keep the children out, and don't take the horses and wagon straight on. Above all else, give sufficient exposure to give some detail in even the deepest shadows.

2028. W. H. HULL—"Meditation," a woman, closed book in hand, with elbow

on table and head leaning on hand, a rather hackneyed pose, but much better than the photography. The fault is under-exposure and consequent development prolonged till the face has lost all trace of texture. With thrice the exposure and just sufficient development it might have been a good photograph.

2029. JOHN ROESCHLAU—"A Bend in the River" is a fine subject well photographed, but one that might have been still better. The viewpoint has been well chosen, but you have forgotten the essential thing with such a subject—exposure for the shadows—and as a consequence what should have been a bright, sunny picture has assumed a funereal appearance. The same exposure with a stop two sizes larger would have been about right and made a charming picture. A dark shadow may sometimes be made to tell with effect, but never every shadow, as in this. Try to get rid of the besetting sin of present-day photographers, or rather we should say camera-carriers—insufficient exposure.

2030. W. E. MARSHALL—"Now Both Look For One Second." In saying that this is a photograph of a girl and boy the title is sufficient to condemn it so far as the pictorial is concerned. They are "looking"—staring at the camera instead of doing almost anything else that would have been better. It is a good photograph that might have been a good picture—a missed opportunity. If you get the chance again, let the children turn their attention to the dog, and by watching and waiting an arrangement will be suggested that will be worth photographing, this not being worth wasting such good photography on.

2031. C. B. OWEN—"Murmuring Pine" is a fine example of technical photography without a trace of an attempt at the pictorial; a well broken up foreground and a middle distance of water, bridge and fence, and trees, all in only two planes, and bridge and fence running straight across the print in a horizontal line. Fine as is the photography, the values are not nearly so true as they might have been, as you might have been quite sure when you saw the intolerable white paper sky. With a longer exposure you would have got the trees as good or better than they are before

No. 2039

NOW, BOTH LOOK FOR ONE SECOND

W. E. Marshall

No. 2031

MURMURING PINES

C. B. Owen

No 2032

ALONG THE WATER FRONT

H. H. Harvey

the sky, fence and bridge were so white, and from a different point of view the lines would not have been so offensive as they are. The toning down of the sky would very much improve this.

2032. H. H. HARVEY.—“Along the Water Front” is a well-arranged subject, but sadly wanting in contrast, water, sky and foreground being almost all in one tone, a dully grey. The margin of the water is, however, a puzzle, the line of demarkation between it and the sandy foreground being exactly as if a pencil line had been drawn, an effect that is both unnatural and unsatisfactory. Longer development might have given more contrast and been a decided improvement.

2033. P. B. TUCKER.—“Spring” seems merely a confused mass of stunted trees, with a marshy foreground, and in the mid-

dle distance what appears to be a patch of snow. We cannot see anything that should have induced you to photograph it, as, although the photography is fairly good, the subject was not worth photographing.

2034. JULES A. BOURQUIN.—“My Little Japanese,” although a fairly good photograph, is about as unlike a Japanese as chalk is from cheese. The only way to make a Western pass for an Eastern is to turn the face right about, and even then there is more likelihood of a failure than a success. As a photograph, however, it is good except for the placing, but you must feel that the head is too high; that is, with too little margin above, making the figure seem unnaturally tall; conveying, to us, at least, the idea that it is a copy of a gigantic wooden figure such as might be found in a Chinese Joss house, or temple.

Who Had Wheels?

The accompanying picture of the windmill was made at the Boston convention on a Cranier medium iso plate and received an exposure of three minutes with f-32. There is nothing remarkable about the picture and it was only made because the windmill, which adjoined the display of the products of the Berlin Anilin Works, struck

me as being the most original of the many attractive exhibits. Now if the arms of the windmill had been revolving it is needless to say that 1-500th part of a second would have been none too short an exposure to have the lettering show. Imagine my surprise, therefore, on reading the following sentence in the lurid report of the convention in the *September Camera*: “The

No. 2034

MY LITTLE JAPANESE

Jules A. Bourquin

greatest novelty shown was in the form of a Dutch windmill at the booth of the Berlin Anilin Works, New York. The sweeping arms were propelled by a small motor and the effect was realistic indeed." Is this the dream of a "rarebit fiend" or did the reporter for the *Camera* mix his drinks not wisely but too well? Mr. Hall, of the Berlin Anilin Works, assures me that there was no motor and I have not run across any one else who saw the wheels go round. As a rule, the bulk of the conventioners were satisfied with the mead and lemonade freely dispensed by the American Aristo Company.

J. P. CHALMERS.

A Carnival of Lenses.

In a recent conversation with the advertising manager of the Bausch & Lomb Optical Company, the question was asked why more of the Bausch & Lomb lenses were not mentioned in their announcements, and the reply elicited a very interesting phase of the development of the the great industry which has grown up in Rochester during the last half century.

"We have so many lenses," we are told, "that it seems almost impossible to bring

out the various virtues of all with sufficient clearness in our business announcements, and we have to be content with a description of a few, asking our friends to send for our catalogs in order that they may obtain for themselves a more complete description of the others. Being the first manufacturers of photographic lenses in America, the Bausch & Lomb Optical Company have steadily acquired the most improved formulæ for lens construction, and in addition to the lenses of their own design, had placed in their hands the manufacture of the great series of lenses designed by the Carl Zeiss Optical Company in Europe, so that to-day their series includes lenses for every conceivable purpose, and of every type which practice has shown to be practical.

"In addition to the regular series with which the public is familiar and constant user, their product includes such extraordinary objectives as the Bausch & Lomb portrait f-2.2 objective, the fastest long-focus photographic lens in the world, the large lenses having a diameter of as much as 6 $\frac{1}{4}$ inches, capable of making full-sized heads by ordinary gas-light with only a few seconds' exposure. Thousands upon thousands of rapid projection lenses for stereopticons, biographs, kinetoscopes, etc., are produced, as well as those other still more highly specialized lenses required in the making of moving-picture negatives, lenses for photographic time recorders, automatic photographic portrait machines, photographing projectiles and other rapidly moving objects by electric spark; objectives for various scientific instruments are among the products requiring the highest skill and accuracy, although but little known to the general public. It ought to be some satisfaction for a photographer, whether he is making pictures as a pastime or for profit, to know that the lenses he uses are produced in an institution of this kind and are examined and passed upon by those whose experience covers such a wide range in photographic optics.

"It is really wonderful how the testing and building of these lenses becomes a part of the man's nature. A trained optician, after these lenses have passed through his hands for years, is able to fairly feel the qualities of a lens and to

**DOCKED
FOR REPAIRS**

Winner of Monthly Competition

**G. Frank Radway
Utica, N. Y.**

adjust it and bring it up to its highest working efficiency with the same sort of intuition that a fine musician will tune the strings of his violin to the perfect accord which he requires for his finest efforts. Of course, it is necessary for him to have at hand those scientific aids in the way of apparatus and methods without which his skill would be ineffective. But these have

long since become a matter of course in the Bausch & Lomb system of lens production.

"If the users of lenses could take a little journey through the great factory and see with their own eyes the methods employed and the results accomplished, there would be no need for the advertising manager."

L. B. ELLIOTT.

J. G. GRANT.—From opticians' lists you will see that the prices of lenses increase with their focal length, and therefore most of the lenses in already fitted cameras are of too short a focus to give a perspective that appears true; all that the makers or fitters seem to care for being that they shall "cover the plate." Those who take photography seriously and know something about optics never buy cameras already fitted with lenses, but select a lens suited to their work and get a camera to suit it. Supplementary lenses, either for lengthening or shortening the focus, are merely makeshifts and are rarely employed by serious photographers. You are mistaken; we should most certainly not have trimmed the picture to which you refer, although we know that many, even acknowledged artists, fail to see the reason why, a fact that only strengthens our frequently expressed opinion, that we see in a picture only what we bring to it. We are sorry that circumstances have hitherto prevented our keeping our promise to return to the enlarging camera, and hope to do so in an early number.

C. W. THOMAS.—The scratch on the surface of the lens will not to any extent interfere with its performance, but it should be filled up with some opaque substance. Thick China ink will do, but care is necessary in removing the surplus from the delicate surface of a costly anastigmat.

(MISS) G. R. WATSON.—Each of the three formulæ is as good as, and no better than, the others, but we should not add the

bromide to either unless we knew that you had over-exposed, and that you need not fear so long as you go by the exposure meter. There is nothing better than edinol, and no formula better than that marked No. 1. Stick to it till you know it thoroughly, and then you will not want to change. It will do equally well for paper, and then, unless the whites are quite pure, you may add the prescribed bromide.

"IN LOCO PARENTIS."—It is contrary to rule to recommend the articles of any particular maker, nor can we recommend any particular style of outfit for your ward without knowing something of how far you are disposed to go in the question of price. As, however, "she has the artistic temperament and does not desire to take to photography as a mere amusement, but as a means of art expression," we should recommend a folding camera for plates 7 x 5, and a lens of the rectilinear type of a focus not shorter than ten inches, and twelve would be better, and a rigid tripod. You should buy lens and camera separately if you cannot get the latter already fitted with the former of sufficient length, and you may trust to the dealer to recommend the rest of the material. She may learn all she needs to know from a good hand book, but a few lessons from an expert would lead to a saving in both time and material.

W. R. S.—We rarely print poetry, and never unless in some way connected with photography. Thanks, but please send stamps for its return.

PORTRAIT
By Chas. H. Davis

Davis & Eickemeyer, Studio
New York

THE
AMERICAN AMATEUR PHOTOGRAPHER.

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WINTER WORK.

Notwithstanding the fact that there may be as much interesting work for the camera during the winter as during the summer, we know that thousands will lay aside their cameras when the cold weather comes, only to be resumed on the advent of "sweet spring." There are, of course, a thousand and one reasons why this should not be, but leaving them aside and taking things as they are, we shall try in this and some succeeding articles to suggest a series of things that may be done in the winter months by those who prefer to keep pretty close to the furnace or the stove—fireside photographers, in fact.

Nor need the fireside photographer have difficulty in finding plenty to occupy his evenings and such daylight times as may happen to be at his disposal, as may be seen from the following imperfect list. Probably one of the most interesting phases of winter work, and perhaps the first that should get attention, is the overhauling of the negatives made during the summer; separating them into those that are interesting and worth further treatment and those that are not, and then

working on the selected ones in the various ways to be dealt with in a future article.

The negatives having been improved to the best of the photographer's ability, the best of all uses to which they can be put is the production of lantern slides; as in no form is the product of the art more generally useful, whether for the amusement of the family circle and the neighbors, or larger circles for the benefit of church or school, or even for his own pocket provided he happens to have the gift of the gab. Negatives suited for the production of lantern slides are also suited for enlarging, and, while under ordinary circumstances, we prefer to make enlarged negatives, we know that good results may be got by direct enlarging on bromide paper by artificial light. Of course, it is possible to make and print from large negatives at night, especially where there is leisure for printing during an hour or two during the day, but we are dealing now with what may be accomplished altogether at night and by artificial light.

Nor should portraiture by flash-

light be forgotten, as, although the bulk of flashlight work is far from encouraging, it needs only care and study to produce work equal to anything that can be done during the day. Then, thanks to the various kinds of "gas-light" papers, printing from the negatives so made as well as from the improved output of the summer can be done as well, if not better, by night than by day.

Lastly, in the meantime at least—for we have already suggested enough to keep in constant employment the most persistent home-keeper—there are the thousand and one things that can be made from or with prints either for use or ornament, and, especially when the amateur is a lady, for church sales and bazaars. Lamp shades, window transparencies, colored miniatures, the coloring on the back, and so simple as to be beautifully executed by any one without a knowledge of painting, etc., etc.; and if more are required it will be found in Woodbury's "Photographic Amusements," a recent edition of which, we understand, has been published by the publishers of *The Photographic Times*.

Whatever may be the ultimate object, the improvement of the negatives should first be attended to; and there are few that may not be improved. The first step should be the making of a print from each of what may be called the passed or accepted negatives; and, probably also, the coating of the backs of those negatives with a matt varnish. It is well to have two kinds of varnish, one colorless, the other slightly tinted with a reddish or yellowish alcoholic solution of aniline dye; the latter to be used on such as are lacking in contrast from over-exposure, under-

development, or other cause, and that, by scraping, can have it increased. A careful study of the print and its negative, especially after a little practice, will show just what should be done and how to do it. Attention should first be given to the film side. Local reduction with Farmer's solution on a tuft of cotton, or the same moistened with alcohol often works wonders, as does a few pencil lines where they are needed. Then, the varnish easily takes lead from the pencil or the stump; and, in conjunction with the scraper, may readily alter the whole tone of the negative and lengthen the degree of gradation to an extent that changes its resulting print from a mere record of fact, and, oftener than not, a distorted record to a really fine picture.

All the negatives that are worth improving having been improved, to us at least, the most important use to which they can be put is their reproduction as lantern slides; but while in reality that is one of the simplest of all photographic operations; to judge from the commercial output as well as from those of the lantern slide interchange, it is the most difficult, neither of them being anything like what they should and might easily be. For the nature of the commercial slides there is an excuse, the same as is so often given for the nature of the professional portraiture—the demand of buyers or employers. And there is some truth in it. Every one must have noticed at a public exhibition of slides that the applause was invariably given to the hard white and black slide, the "soot and whitewash," or the "summer-snow" pictures, and that those full of the most delicate detail and greatest degree of gradation—those most true to nature—were passed

over in silence. Buyers of slides, and the lecturers are mostly so, want what pleases their audience best; and small blame to them. But the amateur makes slides to please himself, and ought not only to know but also to make what he knows or ought to know is the best.

The "best" or only slide that should be the aim of every amateur is a slide with every degree of gradation that is in the negative, and without any part opaque unless there was something quite black in the subject, or any clear glass unless something equally white was there; and in nature such whites and blacks are never or hardly ever found. In other words, in a perfect lantern slide, certainly not in one in every hundred, should there

be either a portion of clear glass or one so opaque that none of the light can pass through it; and, of course, that means that to a certain extent the slides should be made for the light to be employed for their exhibition. On the whole, however, that is hardly possible, and therefore it may be taken as a guide to make them suitable for lime-light illumination, something between the best lamp and the electric arc, with a leaning toward the brightest, as the exhibitor can always reduce excessive illumination by slightly tinted glasses.

How best, or at least how satisfactorily, to set about making slides of the highest quality shall be told in our next, and told as the beginning of a series of articles on winter work.

THE EXHIBITIONS OF THE ROYAL AND THE SALON.

The two British exhibitions, that of the Royal and of the Salon, or "Linked Ring," are in full swing, and so are their critics, the outcome of their work leading to the usual conclusion—that one man's meat is another's poison, or that even the most authoritative criticism is after all little better than merely the opinion of one man. Taking them all in all, however, the consensus of opinion is that each is very decidedly better than any of its predecessors; and that, in spite of the fact that for the first time in its history the Royal gives no awards in its pictorial section, the medal of the Royal having hitherto been the "Blue-Ribbon" of photography.

Of course, it was there as it was here when it was decided to do away with the awards; the croakers proph-

sied a sad falling off of the exhibitors, but the answer to that was a greater number of offerings than ever, something like 2,500 frames having been sent in, although only 247 were accepted and hung. These, so far as we can make out from the catalogue kindly sent to us by the secretary, were by 156 authors; but how comes it that amongst all those there are only a baker's dozen, thirteen women, and three of those are Americans? We are often told that photography is pre-eminently suited for them, and that they are equally suited for it; and we know that on this side at least they fairly well hold their own so far as the sharing of photographic fame goes, and there must be a reason, although we do not know where to look for it, for this back-seat position of our British sisters.

As usual, the catalogue is well illustrated, there being twenty-two half-tone reproductions, and although they are all of a kind that now meet with something like general approval by the critics, many are such as were generally sneered at when the Salon of the Linked-Ring first opened its doors. Time works changes even in pictorial photography; but the older we get the slower we go, and the Royal Exhibition is now in its fiftieth year.

Compared with the Royal the Salon is but a bantling, this being only its thirteenth show; but it must be gratifying to the "Links" who manage it to know that its elder brother is not too old to learn that there is an art different from straight photography; and that it is strong enough to stand on its own feet without being strengthened by medals or other awards.

From the way in which the pictures were selected—British, Continental, and American, each by the links of its nationality—we have no means of ascertaining just how many were submitted for inspection; but there have been hung only 254, thirty less than were shown last year. As before, Frederick H. Evans has been responsible for the hanging and decoration; and by one consent he has done it remarkably well. The following analysis, which we clip from *The Photographic News*, gives information not comeatable elsewhere:

"We note that thirty less frames are hung this year than last, and of the 254 exhibits on view no less than 117 are by American and Continental workers, and have therefore been selected in their respective countries. Of the remaining 137 exhibits 72 are by eighteen English members of the Linked Ring, which means an average

of four each, while 65 pictures are all that represent the great body of workers all over the country who submitted their pictorial efforts of the year. Of these, F. J. Mortimer, Arthur Marshall, E. T. Holding, Mrs. G. A. Barton, J. H. Anderson, and A. H. Blake have had three or more accepted, and the remainder are mostly represented by single pictures. It will be seen, therefore, that the work by the English Links and that from outside is fairly equally divided, although it must be confessed the higher average of 'accepted' pictures by members of the Ring, who also constitute the selection committee, must have a rather discouraging effect on those who spent a lot of time specially preparing work for the show."

While it is not given to all to bring to pictures just what is necessary either for their comprehension or their enjoyment, it would be well for some of the less-favored ones to cultivate sufficient humility to believe that others may see where they are blind. The following is a sample of a certain kind of criticism meant to be funny, but with a sting in its tail. It rarely hurts, however, and when it does it is the critic who suffers:

"The genesis of No. 200, 'Woodland Pool,' we suggest to be as follows: A piece of brown paper was left out in the rain all night. Smuts collected upon its virgin surface. Cats fought in its neighborhood and spilled their gore and whiskers over it. Pigeons nestled on it in the dewy morn. The wind wafted it into the gutter, and finally its mangled remains, now all the colors of the rainbow, were rescued, ironed out, and sent to the Salon, where, needless to say, it was received with open arms, because it

was impossible to see what it was all about."

We may be as deficient in the ability to appreciate as this critic is to see what beauty there may be in this picture, but in either case the opinion of each is the opinion of only one, and each should and will be taken only for what it is worth. All that we on this side care to know—or, indeed, need to know—is that, as we have already said, both exhibitions are each an improvement on all or any that have gone before; and, consequently, a

proof that pictorial photography is progressing. The question as to which of the countries represented takes the lead, or in what proportions the credit is to be awarded, is of secondary importance; nor should fault be found with the few who, in adopting new methods or styles, may at first go a little over the score. However much other things may change, human nature remains very much the same, and it has ever been so, that the proselyte is more enthusiastic than the proselytiser.

PRIZE WINNERS OF THE POSTAL PHOTOGRAPHIC CLUB.

Few of our readers, we suppose, know anything of the Postal Photographic Club, and fewer still, we fear, will have an opportunity of seeing the "Winners' Album" that lies before us now. The more's the pity, as, outside of the higher class of exhibitions, we have rarely if ever seen so many really fine pictures in a collection of its size.

The Postal Photographic Club, as we understand it, has its headquarters in Washington, Messrs. C. E. Fairman and G. A. Brandt being president and secretary; and its success under their management is a striking testimony to their zeal and ability. The members, limited to forty, are each expected to contribute one print each month, such prints being inserted into an album and sent on a circular route. In this way each member sees the work of all the others, and is able to compare it with his own. He is also expected to express his opinion of as many of the prints as he chooses, to criticise them in fact, and also by a vote to distinguish what in his opinion are the best and second best in the lot.

This has apparently been going on since December, 1898, although the club is much older than that; and now fifty-one of the prints so voted for have been made into a beautifully got-up album and sent on tour amongst the members.

It is this that is before us now, and as we are given the supreme pleasure, even the delight of seeing and *feeling* the beauty of most of the pictures only by favor and through the kindness of one of the members, we cannot say some things that under other circumstances we should feel constrained to say. But there are some lessons that we may fairly notice as being taught by the contents of the album. The best for one month, for example, may not be within even measurable distance of the best of another, yet its author is placed on an equal footing, and, unless he has more sense and greater ability than the average of his class, is more or less injured by the false position in which he is placed. A case in point occurs in two prints, both photographs of parts of the in-

terior of the Congress Library, and both in the technical class. No. 24, "Interior Congress Library," is in every sense what it is said to be, and an example of very fine technique, pillars of real marble and values very nearly true; altogether well deserving its position. No. 38, "In Congress Library," however, although in exactly the same position, is a very different piece of work. Instead of an interior, it is simply three pillars used as setting for a photograph of one of the mosaics on the walls. There is little of the texture of marble, although the quality of the cartoon has been to a certain extent sacrificed to it, and altogether, although honored in the same way as No. 24, and classed as No. 1, it is, as said before, not within measurable distance of it.

Of course, we do not wish to imply that in this particular case the slightest injury has been done, the author of No. 38 knows too much for that; but we merely call attention to the possibility of injury, examples of which have come within our knowledge not once but many times in connection with some of the minor exhibitions.

In the circular accompanying the album the members are requested to record their votes on behalf of the best and second best in the collection, with a view to still further honors; and, while we have no right to vote, we can do no harm by saying that in

our opinion the best and second best pictures are No. 51, "Twilight After Showers," and No. 23, "A Winter Afternoon," the latter almost bringing a cold shiver as we study it. We may say that we found a difficulty in deciding as between Nos. 23 and 27, "A June Flood in the Forest," finally missing the necessary atmosphere in No. 27.

Just one more observation, and that in proof of our often asserted fact that marine exposures are almost universally too short. To call the attention of the members of the Postal Club to No. 4, "Breaking Waves Dash High," looks too much like criticism, which we have already said we have no right to give; but its importance must be our excuse. And we shall only put it in the form of a question, Are rocks properly or even admittedly represented as lumps of coal? We think not, and while this may have been the best of that month it is as far from true in its values as light is from darkness.

But the spots in the sun do not, to us, lessen its light, and the fly is easily removed from the ointment; although not less easily than it is to overlook the few overrated prints in this album, while what remains are enough to show that the members of the Postal Photographic Club, or many of them at least, are of the stuff from which artists are evolved.

AFTER TREATMENT OF NEGATIVES.

By E. A. BRADFORD.

Negatives are seldom in perfect harmony for printing, and a great deal may be done by after-treatment to even good negatives in order to get

the best prints. One may have what he considers a good negative, which will not give a good print owing to the contrast being too strong, or it

may have some other defects, such as markings from the developer, etc.

I will endeavor to explain my method of printing from such negatives. There are various simple means by which inferior negatives may be improved, such as covering the back of the plate with tissue paper and working on it, painting over the shadows of the negative with Prussian blue or albumen color, covering the back with stained negative varnish, collodion, bi-chromated gelatine, or matt varnish. This latter method I find the most simple, and would advise those who have not tried it to take it up. I have used it mostly in conjunction with tissue paper, and will endeavor to explain my method of using it. The varnish may be made (a formula for same will be found in almost any of the photographic annals), but when only a small quantity is to be used, such as an amateur would require, it is better to buy it from one of the stock houses. To coat the plate, first thoroughly clean the back, pour a small quantity in the middle, enough to cover the plate, then tilt the plate to work the varnish up to the top right-hand corner, then to the top left, then bottom left, and off at the bottom right-hand corner, pouring surplus back into a bottle, just the same as you would coat a plate with collodion in wet-plate work. When all the surplus has been poured back, work the plate about in order that the varnish will dry evenly, and crepey. Stand the plate on end until it is thoroughly dry, which should take about two minutes. When dry, you can work on the varnish to almost any extent. High lights can be softened by taking off the matt varnish, this being done by scraping varnish with a

knife. Shadows may be reduced by working on the varnish with color or plumbago, dabbed on with a stump or tip of the finger. Should this not be sufficient, "dodging" stained varnish may be used, or tissue paper in conjunction with plain matt varnish. A cardboard frame is cut and covered with tissue, and when the high lights are cut out it is pinned on to the printing frame. The paper should be cut with a ragged edge so that the dodging is less liable to show. Several thicknesses of tissue may be used if necessary, either with the matt varnish or alone, but when more than one thickness is used the cut-out parts must overlap one another. I have used as many as four thicknesses, and found a great improvement in the resultant print. This method I have found extremely useful in printing interiors, especially where stained glass windows appear. When the shadows are very weak and clog up in printing, they may be blocked out with opaque paper during part of the time when printing. This is best done gradually, that is, block out when starting printing, then take it away, and let it print a little; put it on again, and so on. This will entirely obliterate any sign of dodging, and one would be surprised with the improvements that could be made after a little practice. Of course, in practising this dodging one must not be disheartened at losing a few prints. Flat negatives may also be improved by working on the high lights and opening up the shadows.

Another way of reducing contrast is by local reduction or intensification. To reduce locally a little practice is required before it can be successfully done. I would advise those who have

not had any experience to try first on a spoilt negative. Two of the best reducers for this class of work are ferricyanide and hypo, and perchloride of iron. If you wish to reduce as soon as the negative is fixed, use the ferricyanide alone immediately the plate is taken from the fixing, the hypo in the film being sufficient to dissolve the oxidized silver. For local reduction after the plate has been once dried, soak it in water until the film is thoroughly wet. When ready for working on, take the plate out of the dish and have it handy to a running tap. Blow the surplus water off the part you want to reduce, and apply the reducing agent with a camel's hair or sable brush, care being taken that the solution does not spread or run down the negative. If this is found to be taking place the plate should be put under the tap; it can be taken up again and the operation repeated. It is not necessary to give any strength of solution, but is best to begin with a weak solution, and strengthen as required. I have used a saturated solution in extreme cases without any mischief being done, but in using such a strong solution as this you must watch the negative very carefully. Another method is to thicken the reducer with a little gum solution or glycerine—it is then less liable to reduce the main portions of the negative—or the glycerine may be rubbed on the negative when it is to be reduced, which will prevent the solution from spreading over the negative, and thus make the work much easier. Local intensification is effected much in the same way as local reduction. The plate is bleached with mercury by the aid of a brush, and when sufficiently bleached wash the whole negative until all the

mercury is dissolved, and flood it with sulphite of soda, ammonia, or nitrate silver, according to the formula in use. I will deal more fully on intensification and reduction later on.

In many negatives there is often a want of atmosphere in the distance and middle distances, and I have found that one strip of paper to cover the distance and middle distance, and another to cover the distance alone, or tissue worked on with a stump, good atmospheric effect is produced. The effect of atmosphere is usually shown by gray tones, as compared with the foreground, and the grayer they are the more distant the object seems to be away. It must also be remembered that distant lights are also grayer than those in the foreground, so care must be taken that they do not appear too light. This may be effected by pieces being cut out of the distant lights or pieces covered over the foreground lights to make them print brighter.

Clouds may be made in a negative with a clear sky by a little judicious working on the negative with a brush and any of the reducing agents I have mentioned. A proof should first be taken from the negative to get an idea of what is wanted. A rough sketch of the sky required to suit the picture may be painted on the print. We are now ready to work in our sky. This is done by the same method as I described in local reduction, only the shape of the clouds as painted in with a brush, care being taken that the reducing agent does not spread. This reducing darkens the sky. High lights to same are put in in the ordinary way by retouching with pencil or crayon. For this class of work a certain amount of artistic taste is required,

as well as a fair knowledge of the different forms of clouds, or some glaring errors will result by putting in a cloud which does not suit the picture. Hard horizons in sea pieces, etc., may be softened in the same way.

REDUCTION OF DENSITY

When a negative has been over-developed and is too dense, the following process may be adopted for reducing it. Make up a 10 per cent. solution ferricyanide potassium. Immerse the negative in a 1 in 8 solution of hypo, and then add a few drops of the ferricyanide solution, carefully watching the action, and taking the negative from the solution before quite reduced to the desired degree. The more ferricyanide added the stronger and quicker the action. When only a small quantity of ferricyanide is used the action proceeds slowly, and the gradations do not suffer so much. With the stronger solution the shadows can be eaten away and the contrasts increased.

INTENSIFICATION.

A negative which is full of detail, but has insufficient printing density, may be much improved by intensification. It is essential that all traces of hypo be removed before intensification is commenced, else stain will result. It is better to intensify before the negative has been dried, but if it has been dried it must be soaked in water until it is thoroughly saturated. When the negative is ready and well washed it is placed in the bleaching bath and allowed to remain until the image is whitened right through the film and all traces of yellowness have

disappeared. Then wash in running water for about half an hour to remove all traces of mercury. Now, if a considerable increase of density is required, place it in a solution of strong ammonia, and allow it to remain until uniformly black throughout; then again wash for about five minutes. If only a slight intensification is required, instead of ammonia, make up a ferrous oxalate developer as follows:

Oxalate potash (saturated solution)	1 oz.
Iron sulphate (saturated solution)	$\frac{1}{4}$ oz.
Ammon. bromide (10 per cent. sol.)	3 mins.

Place the bleached negative in this till all action has ceased; if further density is then desired, repeat the whole operation, bleaching in the mercury, washing and re-developing as before. Sulphite of soda might be used as a darkening agent, this being a very weak intensifier, but is not apt to stain the negative like ammonia, and is more permanent, while ammonia is very strong and increases any stain in the negative. Another first-class intensifier is the silver cyanide, this negative being bleached with mercury and bromide in the same way as mercury alone, and when washed it is blackened with cyanide pot. and nitrate of silver.

In conclusion, I wish to warn members who have not handled mercury or ferricyanide that, in using these chemicals, great care should be taken, as they are very poisonous, and are liable to poison the blood if they should get into any cuts.—*The Australasian Photographic Review.*

SPIRIT PHOTOGRAPHY AGAIN.

In reproducing the following from *The British Journal of Photography* as a hint to those who can take it of how to turn some of their leisure to profitable account, we have no intention of charging the author of the photographs referred to with bad faith, only adding that, as was to have been expected, he has been inundated with requests for full-sized copies, on the usual terms, of course; and that, if he knows his business, as soon as that demand ceases it will be renewed by a flood of picture postcards.

MYSTERIOUS PHOTOGRAPHS.—A mild sensation, which has travelled as far as Accrington and Manchester, has been caused in the Radcliffe Hall district by the discovery of a woman's figure on a photograph of the interior of the Close Wesleyan Chapel, taken by Mr. Street, Cross Lane. Mr. Street went into the chapel one afternoon with the intention of taking views of the interior. He had a box containing several unexposed plates, and he took two views. The plates were the ordinary "backed" plates, and were given an exposure of five minutes at f-22. When he came to develop them, Mr. Street found that on the first one—a view of the altar windows with the tablets underneath—there was the full-length figure of a well-dressed woman alongside the window. The woman, whose features are quite clear, stands as if waiting for some one, and she has her hands clasped in front of her, just

as though she were posing. She also wears a blouse, seemingly of some light material. On the second photograph, which includes the organ, the woman's figure is horizontal, about an inch from the top of the plate. The strange part about this, however, is that the lower part of her body is separate from the top, which, except her head, which is not shown, appears next to it. In every other detail the photographs are practically perfect, and excellent examples of interiors. The gold lettering on the woodwork behind the altar is remarkably clear. As showing that the plates had never been exposed, Mr. Street took, with a third plate, at 5 o'clock the same afternoon, a photograph of the interior of the parish church, and this is a perfectly clear one and just as ordinary. The exposure was the same, and the plate of the same make. One of the remarkable things about the first photograph is that the decorations on the walls are seen to be above and not under the shadow, or whatever it is, of the woman, and a glass only serves to bring out this fact more acutely. Mr. Street was alone in the chapel, and, prior to taking the photographs, rambled about in order to find the best position. He is absolutely certain that no one was with him. The photographs have come under the minute observation of several experts in the district and in Manchester. They, however, failed to throw any light on the subject.

We need not say how such spirit pictures may be made. The professional who does not know that is not worth salt to his cereal.

 PLATINUM PRINTS IN VARIOUS COLORS.

T. A. Aldridge, in the Ilford Company's *Photographic Scraps*, gives the following methods for the production of sepia, warm brown, and blue-green on platinum prints; although, unless for some particular subjects, we

should never think of changing the beautiful color of properly made platinum prints. The necessary chemicals are: Potassium ferricyanide, uranium nitrate, glacial acetic acid, and ferric chloride; the latter being very deli-

quescent, should be made into a stock solution of ten grains to the drachm:

"For sepia toning, twelve grains of ferricyanide are dissolved in six ounces of distilled water, to which one drachm of glacial acetic acid is added. In another bottle sixteen grains of uranium nitrate are dissolved in the same quantity of water, also with one drachm of glacial acetic acid added. Three ounces of each solution are mixed in a clean half-plate porcelain dish. Before placing the print in the toning mixture it is advisable to give it an extra bath in hydrochloric acid—two drachms to ten ounces of water—in order to make sure that all the iron has been eliminated from the paper. The print should be placed in the toning mixture face downwards.

"Toning is rather slow, and only one print can be toned at a time. It may take any time from one to two hours, or even more. The prints must be slightly under exposed to allow for the intensification which takes place. As the mixture soon deteriorates a fresh bath must be made up for every three or four prints.

"An old toning bath, filtered through cotton-wool, is sometimes useful for prints containing old stone buildings, or for experiments in blue

toning. If warm brown tones are required, twelve grains of uranium nitrate are dissolved instead of the sixteen grains mentioned previously. The chemicals used are extremely poisonous, therefore the fingers should not be placed in the solutions, nor should the prints be touched until after washing has taken place.

"For blue-green toning, two drachms of the ferric chloride solution are added to two ounces of water. When the print has reached the sepia color, it is placed in this ferric chloride bath without washing. The toning is rapid. Not more than two or three prints should be toned in one bath, and as soon as the desired tone is obtained the print must be put into a bath of acetic acid—two drachms to two ounces of water—then slightly washed and dried. The sepia-toned prints should be washed in running water for a few minutes, and then placed in a weak acetic acid bath—two drachms to four ounces of water.

"By reversing the order of the baths a blue tone may be obtained, but this is hardly worth the trouble, except perhaps for some special moonlight effect. The blue-green tone is pleasing in some river scenes, seascapes, and sunset effects over water."

AN INTERVIEW WITH CHARLES H. DAVIS.

BY CHARLES NORDHOFF.

At the most fashionable part of Fifth avenue, where more than fifty thousand people are said to pass every day, on the top floor of a stylish office building, you will find the famous studio of Davis & Eickemeyer, successors to Davis & Sanford.

A huge reception hall, with a skylight decorated with evergreens, greets the visitor. There are pictures everywhere—on the richly carved tables of Flemish style, on the walls, in showcases—photographs, portraits, pictorial bits and gum prints, pastels,

miniatures, and oil paintings in frames of every size and period imaginable.

I send in my card, and while waiting turn over the pages of an edition de luxe of Sir Henry Raeburn's paintings that lies on the table. Mr. Charles H. Davis enters—a striking personality, genial, unassuming, matter-of-fact—with that peculiar twist and slight stoop in his figure which men of will power and restless energy invariably have.

"May I look over your prints?" I ask. He is only too willing. The portraits present a remarkable average of excellence. They are all made in the academic style, clear and distinct, and have that peculiar sympathetic quality which tells even the stranger that they are good likenesses.

"You do not have much sympathy with the tonalists?"

"No, they are not to be taken seriously. They are a joke." His remarks are always pert, to the point, and he utters them with peculiar emphasis, but uses gestures rather sparingly.

"I believe in clear lighting," he continues. "I want the entire figure, and try to give it as much variety as possible. I have no patience with these men who only restrict themselves to bust portraits. There is no chance for composition in them. I work on the same principles as the painters do. I strive for line, a natural attitude. You will find that all my subjects are correctly poised. Never make a mistake in that. You will see that I pay quite as much attention to the position of the feet as I do to the arms and the face."

The standing figures that he shows me are of astonishing variety. They show decorative simplicity and ex-

quisite precision of line, and they are posed in a way to show repose without loss of active suggestion.

"Look at the cast of Diana's head over there. Do you see how the oval of the face, slightly turned sideways, is set upon the neck? The lines of the neck and face flow together in a curve. I pose all my heads this way. It is the classic standard. You will not find a single head that does not carry out this idea. You will also notice that I give particular attention to the hands. I do not know of any other photographer who carries out these ideas, at least not in the same way as I do."

I perfectly agree with him. He is a master of hand posing. He always manages to get the hands into the same plane as the face, and they never look out of place or disproportioned.

"Do you believe in retouching?" I next inquire.

"As little as possible. But I keep in mind that my class of clients insist on the removal of skin blemishes. I do not believe in too many corrections on the negative. I strive to overcome all shortcomings by a system of lighting that flatters my sitters. I seize directly on their best points and pose them in such a way that all their natural defects are hidden or subdued in contradiction to the usual method of over-retouching."

"Then you indorse my opinion that the principal thing in photography is the arrangement of the subject before the picture is taken. You do not believe in taking haphazard shots and correcting them afterward?"

"There are *no accidents* in my work," he answers with peculiar emphasis. "I know exactly what will be on the plate, and I always work to-

ward the ideal as closely as the nature of subjects and gowns permit. You may also state that I am a skilled hair-dresser, and I make use of the knowledge right along during the sittings. There is hardly a day that I am not called upon to arrange the hair of some lady, to build up some elaborate structure or to produce a picturesque effect. I also advocate the use of simple gowns that do not go out of fashion as quickly as tailor-made costumes. It is of advantage to the photographer to portray a lady in a gown that belongs to no special period, as it will enable her to order prints from the same negative even after a lapse of ten or twelve years. I am sometimes asked to select the dress for a lady, and visit her home for that purpose, or let her bring along five or six dresses to choose from. Drapery, of course, would be more picturesque than anything else, and I sometimes succeed in persuading them to make use of it."

"You call yourself an 'art photographer.' Do you really consider it an art?"

"I believe it to be art if rightly handled, and that it should be artistic at all events. Look at some of the pictures in these show-cases, at the ease and naturalness and grace of line. They are perfect portraits in their way, only the color is lacking."

"Have you learned much from your association with artists?" He answers my question in an indirect way.

"I have been employed in art work myself, not as a painter, but in various ways. But many of the artists have come here. Read this."

I glance over a letter:

"I am reconciled to the reproduction of my face. I do not see how

you manage to preserve so accurately the characteristics and at the same time keep the tone so subtle and the modeling so true."

(Signed) F. D. MILLET.

"I have quite a number of the like from Fred Dielman, Kenyon Cox, Thomas Moran, John W. Alexander, and they are absolutely unsolicited."

A strong point in his favor, I say to myself. The artists seem to have no use for that style of work which makes the photograph look like the reproduction of a painting. A photograph should be a photograph. It should display as much good taste and knowledge in artistic handling as possible, but not be subject to that eclecticism which is rampant at present, which is unconfined and uncontrolled by any strong personal prowess and seeks to flatter beauty by piecing together the pictorial inventions of other minds.

Mr. Davis is remarkably free from all idiosyncrasies of contemporary camera work. He has ransacked art, but only to become more efficient in his profession. His ideals are accurate facial expression, clear lighting, simplicity of pose, naturalness and unconscious grace.

The best or most ideal results in photography can be achieved only when the photographer and his subject are thoroughly in sympathy. As it is extremely difficult for any photographer to be thus in sympathy with many subjects, differing as they do greatly in character, it follows that perfect photographic work must be very limited in quantity, unless the photographer can by cultivation and some degree of self-abrogation, establish such a bond. Charles H. Davis, as well as his new associate, Rudolf

Eickemeyer, have this appreciation for the sitter. They see something of interest in every person; and this real sympathy, which so many photog-

raphers lack, will assure the studio now, as in the last two decades, success with the large masses of the intelligent public.

WORDS FROM THE WATCH-TOWER.

BY WATCHMAN.

Who says that photography is on the wane? Not at least a writer in *The Amateur Photographer*, who says that within the year as much as fifty guineas—over \$250 per print—has been asked and paid for reproduction rights in one publication.

* * *

It is surprising how many old things are from time to time hunted out and introduced as new. The latest comes from the Dresden paper *Apollo*, which has this to say: "Living pictures of an interesting kind may be exhibited by any amateur, and that by reducing the exhibiting device or cinematograph to its simplest expression, a piece of string. The subject must be one in which there are two characteristic positions; for example, a person pumping water; and these two positions must be separately photographed with an ordinary camera. The two photographs are now mounted on opposite sides of a card and upside down in relation one to the other. A piece of string or thread being now attached to each side of the card, near the middle, the strings are twisted backwards and forwards between the finger and thumb so that the card spins round in front of the observer's face, when the alternating images will produce the effect of the person pumping."

This will be recognized as the "Thaumatrope," invented, if it can be

called an invention, some seventy years ago by Plateau, and I have the clearest recollection of earning a considerable number of brass buttons by showing it in succession to many parties of my school-fellows; the buttons being turned into cash at the rate of a penny—two cents—for each four ounces. The admission fee being only one button, the ounces did not accumulate rapidly, but a little then bulked largely in our eyes. I remember also that my most effective picture was not so much in the moving line as an example of sleight-of-hand; there being on one side a cage and on the other a parrot. The cage was first shown empty, and then when the paper was set a-whirling the parrot was seen seated in its ring.

* * *

HOW SOME ROYAL PORTRAITS ARE MADE.—The following, which I clip from *The Photographic News*, may or may not be true, but there is always some fire where there is smoke, and a straw shows the direction of the wind.

A story about the Czar which is being told deals with the dismissal of one of the Imperial valets named Pustakhin, and the extraordinary revenge taken by the latter's friends on the Emperor. Pustakhin, it is declared, was offered the sum of 10,000 roubles by an enterprising American

editor if he could supply him with a dozen photographs of the Czar, showing the most intimate details of his private life. By some means the facts came to the knowledge of the authorities. Pustakhin was questioned, his replies were deemed unsatisfactory, and he was summarily dismissed from the Imperial service. Having lost a good appointment, the valet was loth to lose the money which had tempted him. He visited a certain St. Petersburg photographer, who agreed to take a series of photographs which could not be told from the real thing. The police got wind of Pustakhin's enterprise. The two men were seized, but only after a set of the faked negatives had been deposited in a place of safety. Both culprits were sent to Siberia, but Pustakhin's friends are now taking their revenge and coining money by the secret sale of the spurious photographs, perhaps the most popular of which shows the puny body of Nicholas II. emerging from a colossal bath.

* * *

It has been said that it is good policy, when you want only a sleeve to ask for a new gown; but it is sometimes fatal to ask too much. A case in point recently occurred in a Glasgow "small-debt" court, where a Rothsey photographer sued a Glasgow newspaper for damages for having without permission reproduced a registered portrait. The photographer claimed ten pounds (\$50) for each copy, estimating the number at 25,000, or \$1,250,000; a tidy sum for the use, or misuse, of one photograph. So apparently thought the judge, who said it was not possible that the legislature could have intended to give a court from which there was no appeal

power to deal with such vast sums, and decided in favor of the defender, awarding him expenses. Therein I think the judge allowed his "righteous indignation" to obscure his better judgment. It was right to give the verdict in favor of the defender, the claim being out of all reason; but he had been guilty of a fault and should have been made to pay the costs of the suit.

* * *

Editors, even photographic editors, are the better for a little looking after when dealing with optical matters. He in whose hands are the destinies of *Focus*, allowed a correspondent to say in a recent number of that generally interesting journal that a wide-angle lens was more rapid than one of an ordinary angle, because of the larger bundle of rays which it collects and transmits. Having been taken to task for the statement, he gives the following explanation, which leaves the matter as far from what it should as before. Whoever, in getting the best out of a wide-angle lens, would think of employing the large aperture that would be right with one of the narrow variety? Here follows his explanation:

"In the article 'About Choosing a Lens,' which appeared in our issue of August 16, our contributor was in error made to say that 'a short focus lens is more rapid than a long focus instrument, because a short focus lens includes a wider angle of view.' Our contributor (who is on the Continent, and was there when his article went to press) desires us to state that this should have been 'because it includes a wider angle of light,' as, of course, in practice wide-angle lenses usually work at relatively small apertures.

Our contributor further states that what he wished to express was that as the speed of a lens depends upon the size of the bundle of rays it collects, it follows that the wider the angle of the cone of rays the greater the rapidity of the lens, and that given a long focus lens and a short focus lens, both with the same diameter of aperture, the short focus lens will collect a larger bundle of rays than a long focus instrument.

"This discrepancy had escaped our attention at the time of going to press." And to this the editor of *Photography* says: "All the comment I have to make on such a statement as this is that it sheds a lurid glare upon the photographic knowledge of those who control *Focus*."

* * *

About the saddest thing in photography is to see how children are dressed and spruced up before being taken to the studio, and frightened out of their little wits by the attempts to pose them when they get there. Children are always better photographed in their running-about clothes and never so well posed as when left to pose themselves. Hear what Mrs. Carine Cadby, one of the most successful photographers of children in England, says in reply to a question as to how she succeeded in posing them so well: "Well, the best plan is to do nothing about posing; leaving all that to the model. A studied pose for a child is altogether out of the question, and if only let alone and interested, it will probably fall into a graceful attitude."

* * *

One often wants to know the relation between the speed numbers of Watkins and Wynne, and although the

method is often given it is as often forgotten. The simplest way is to keep within sight the following table, which is near enough for all practical purposes.

Watkins No.	=	Wynne's No.
16		28
22		32
32		40
45		45
65		56
90		64
130		80
180		90
250		111
350		128

* * *

To back up the editor's plea for a shutter-speed tester in each locality, I reproduce the letter of an amateur in a recent number of *The Amateur Photographer*, only adding that probably the shutters in use here are, or at least some of them are, as faulty as those in England.

Sir—May I draw your attention to the want of system that exists among the makers of hand cameras in the matter of shutter speeds?

No doubt this point is not a new one, but since Messrs. Beck commenced their testing of shutters many dozens of amateurs have been very greatly disappointed to find that the speed numbers marked on their shutters were no guide whatever to the actual exposures.

To give one instance—my own shutter is marked 1-20th, and it actually gives 1-16th; 1-40th, and it gives 1-16th; 1-60th, and it gives 1-18th; 1-80th, and it gives 1-18th; 1-100th, and it gives 1-20th.

This shutter is made by one of our best firms, and I once thought it infallible.

I submit that the maker should either test his shutter before putting it upon the market, or that he should send it out unmarked.

Yours, etc.,

R. W. WHITEMAN

Streatham, S. W. (an "Amateur").

p

Davis & Sanford

PORTRAIT
By Chas. H. Davis

Davis & Dickmeyer
New York

PORTRAIT
By Chas. H. Davis

Davis & Elckmeyer
New York

PORTRAIT
By Chas. H. Davis

Davis & Eickemeyer
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Davis & Rickemeyer
New York

FLOWER GIRL from "Parsifal"
By Chas. H. Davis

Davis & Dickmeyer
New York

PORTRAIT
By Chas. H. Davis

Davis & Dickmeyer
New York

PORTRAIT
By Chas. H. Davis

Davis & Eickemeyer
New York

PORTRAIT
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New York

THROUGH THE WOODS

First in monthly competition

Chas. R. Brown

THE TURN IN THE ROAD

Third in monthly competition

F. F. Sornberger

PA'S GARDENER

Second in monthly competition

John Roschlau

No. 2038

A SHADY LANDING

F. F. Sornberger

No. 2045

A KENTUCKY LANE

J. C. O'Connor

No. 2040

THE FRAMER

Ed. H. Pierce

From a somewhat extended experience in photographic societies and camera clubs, both here and across the water, I can say with confidence that there they have a life of virility far greater than is to be found here; nor is the reason far to seek. It is found in the one word, PUBLICITY. Readers of the European, and especially of the British, photographic periodicals know that full reports of the transactions of even the smallest societies are sent to the editors and their reproduction encourages speakers and readers of papers to speak and read more, and the outside amateurs are induced thereby to become insiders to the benefit both of themselves and the society; while on this side the few members at first gathered together keep the goings on to themselves, with little growth and less outside interest. But the following, which I clip from *The British Journal of Photography*, will tell the story better than can I; and I hope that the executive of every society and club will take it to heart and act on its recommendation.

"One other official who is of vital use to the well-being of the society is often conspicuous by his absence from the list of officials. This is the reporter. The scope and position of this officer are not fully recognized in many societies, and his work is undertaken by the secretary. The duties of the reporter are, in a word, to make notes of the proceedings and supply them in the shape of interesting reports to the photographic and local papers. The secretary should attend to the minutes of the society, but he may draw on the reporter's notes for certain information. The supply of readable reports to the photographic

press keeps the position and activity of the society before the photographic world as nothing else can do, and the full benefit of this publicity is made obvious at exhibition time. A series of notices concerning the work of a photographic society published at frequent intervals in the columns of a paper like *The British Journal of Photography* will do much more to add to the number of entries and quality of the work than the dispatch of unlimited circulars announcing the exhibition, just before the event. In other words, the society is being advertised by means of these reports, and its future prosperity and power to attract useful members depend to a great extent upon the persistency of this advertising. The publication of the reports in the local papers has an effect that produces a rapid return in the shape of awakened local interest in the doings of the society, and also brings the society to the notice of everyone interested in photography in the locality. It will be seen, therefore, that the preparation of reports of societies' proceedings has an important bearing on the prosperity of the society, and, apart from this, a point that is too frequently overlooked is also to be considered. A certain amount of return in the shape of all possible publicity is due to the lecturer, who more often than not has put himself to considerable trouble to prepare his paper. The secretary, in the absence of a duly qualified reporter, finds time to scribble a brief note only of the proceedings, in which frequently the names of members present, votes of thanks, and the bare name of the lecturer and his subject figure as the chief points of interest. The vital points of the lecture are overlooked,

and not only is the lecturer dissatisfied, but the editor to whom it is submitted cuts it down still further to a line or two, or omits it altogether. The duties of reporter are not difficult, and therefore it should be an easy matter to find a member willing to undertake this necessary task and relieve the secretary of at least one duty during the meetings. Usually the secretary, in addition to attending to the usual secretarial duties of correspondence, arranging the program, sending out notices, etc., and writing up the minutes, has to receive the lecturer and see to his comfort, be in attendance on him during the evening, and more often than not has to operate the lantern. To ask him to make a full report of the meeting for the current papers in addition is in most instances too much to expect; which brings us to the question of lanternist, librarian, and curator."

* * *

I have already mentioned the fact that \$250 had been asked and paid for reproduction rights by one publication; and now I see from a notice of the London Salon in *The British Journal* that F. Benedict Herzog's "A Tale of Isolde," a copy of which appears in the latest number of *Camera Work*, is priced at \$480. Surely photography in its pictorial phase is rising by leaps and bounds.

* * *

The following letter and comment, which I clip from *The Amateur Photographer*, speaks for itself, but I should like to add that the author of the letter is mistaken in supposing that Americans generally consider the action referred to "fair." True, one or two of our magazines did try it on, but were called down by some of

the others so that they are not likely to try it again.

THE GOERZ COMPETITION.

To the Editor of The Amateur Photographer: —

Sir—My attention has been drawn to the paragraph on page 182 of your issue of September 5th, in which you criticize one of the rules relating to the competition recently announced by my New York branch. Will you allow me to say that this competition has been entirely organized by the management of my New York house, which is altogether separate from that of London, and that, personally, I entirely agree with the opinion you express regarding the unfairness of the offending Clause 6. It would really seem to me that what according to American ideas is fair does not necessarily coincide with English views. In point of fact, the competition organized in 1903, the rules of which were almost entirely drawn up by me, contained the following clause, which, I think, speaks for itself: "I reserve the right to use the negative of any competitive print, although it may not have received a prize, at the following fees: Up to 7 by 5 in., 10s. 6d.; 8½ by 6½ in. and 18 by 24 cm., 15s.; 10 by 8 in., 20s.; 15 by 12 in., 25s." I trust that you will see your way to accord the same publicity to this letter as you have given to the announcement of the competition. Yours, etc.,

PAUL PONGE,

Manager of the London office.

1 to 6, Holborn Circus, London, E. C., September 7, 1905.

[We are very glad to be able to publish the above letter from Mr. Paul Ponge, manager of C. P. Goerz's London business. If we did not make it

clear that the unfair terms of the competition, in connection with which we were asked to distribute circulars, only concerned the New York branch, we are sorry; but at the same time are glad to have furnished Mr. Ponge an opportunity of contrasting the very different spirit in which the competition arranged by him was drawn up. There is naivete in his suggestion that "what according to American ideas is fair does not necessarily coincide with English views."—ED. A. P.]

* * *

Why do so many British editors of photographic magazines in speaking of American magazines refer to them as "one of the American contemporaries" instead of mentioning the particular journal? The latest example I have seen is in *The Photographic News*, where its editor shows up one of them under that designation for having published an article describing how to get a stereoscopic effect from two prints from one negative; he says "from one lens," but means the other thing. Now, inasmuch as no editor who is fit for his job could attempt to show how to do such an impossibility, it is hardly fair to throw a shade of suspicion over the whole of the fraternity because of one ignoramus, especially as he might be able to show that he was less guilty than circumstances make it appear. While not holding a brief for American editors, I am quite sure that they would rather be designated than slumped.

* * *

Someone of a statistical turn of mind has said that only one out of every fifty photographic patents has been of any financial value to the patentees; the other forty-nine not being worth the paper on which they were

written; and of most of them I am inclined to say, serves them right. Some were doubtless good enough, but not properly introduced; some were old things with slightly new faces, but most were but trifling improvements on things or methods already well known. It is to these latter that I so strongly object. Why should anyone indebted to all that had gone before run to the patent office with any little improvement on which he stumbles instead of being glad to pay some of that great debt?

Here follows one such, the notice of which I clip from *The British Journal of Photography*, the only claim being the previous coating with the coloring matter in the gum method of printing. Now, even if this were new, which it is not, surely a right-minded man would have been glad to freely throw his little stone on the big gum cairn instead of wanting to be paid for doing so. But he will be disappointed. It will easily be shown that the changes that have been rung on the coatings of the gum method in at least half a dozen ways included the previous coloring, and that it is open to all who care to do it.

A MODIFIED GUM PROCESS.—No. 11,077, 1905. The invention relates to pigment bichromate processes, and lays stress on the method of manufacture, in which the paper is first coated with a soluble color and then with a layer of bichromated albumen, or of albumen to be bichromated. It is claimed for this method that it has the advantage that the layer of color will not become dissolved and intimately mixed with the layer which is used as a carrier for the sensitizing medium when it is quickly applied. Beautiful brill-

iant shadows with dull lights and properly graduated half-tones will thereby be obtained. Another important advantage is that the time of exposure indicated by the photometer need not be altered in accordance with the different colors of the pigment paper, as the light always passes through a uniform uncolored upper sensitive layer, whereas, if the layer of color is at the top, as in ordinary carbon or pigment papers, it acts as a light-filter or screen. Properly sized paper is coated with a soluble layer of coloring matter in a uniform manner, and dried. Then a solution of bichromated albumen (say 50 parts by weight of albumen, dissolved in 100 parts by weight of bichromate of potash 1:10) is applied over the layer of color, or, instead of this solution, a colloid substance, such, for instance, as bichromated dextrine (1:2), may be used, and the whole is left to dry again. The paper is now ready for use, and the printing is accomplished with the aid of a photometer, whereupon it is soaked in cold water and developed, say, with a brush. Owing to the action of light, the colloid surface, and the color under it, will become more or less insoluble, according to the exposure and owing to the thin layer of color and colloid, the finest half-tones are produced. Karl Pflanz, 30, Graben, Linz a-D.

* * *

"A little knowledge is a dangerous thing," and hardly less so is a little carelessness. An example probably of both and certainly of one is to be found in one of a series of "notes, news and extracts" in a contemporary. The author is dealing with the well-

known effects of the bichromate salts on the skin and mucous membrane of many of the carbon and gum-bichromate printers; and gives the following formula for an ointment which he says "will be found to afford considerable relief":

Mercury (by weight).....	1 oz.
Nitric acid	3 fl. oz.
Prepared lard	3¾ oz.
Olive oil	8 fl. oz.

This should be dissolved carefully at a temperature of 212 deg. F. The mixing should be very thorough, and the whole should be stirred until cold. It is applied like any other ointment.

This is practically the formula of the *pharmacopœa* for the *Unguentum Hydrargyri Nitratis*, or nitrate of mercury ointment or citrine ointment of the drug stores, but it is evident that the author of the paragraph when he copied it did not know that it is one of the most difficult of pharmaceutical preparations to make as it should be. I pity the poor fellow that tries to make this with no better instructions than are here given, and he will be all the more deserving of pity should he apply it to his skin. But the ointment properly made is one of the most valuable skin stimulants and alteratives, and may be used with much benefit in both bichromate and metol or other developer poisoning. But don't try to make it unless by the instructions in the *pharmacopœa*, and not even then unless you have had a large experience in pharmaceutical chemistry. Go to the drug store, ask for either nitrate of mercury or citrine ointments, and don't take it unless it is of a fine lemon color, the only test of proper preparation.

* * *

Some of my readers maybe won't believe it, but it always pains me to

find fault with the work of others. But what can I do? I am paid for doing what is right where I think other writers are wrong; not that I am always right myself, but I am always glad to be put so when I do make a mistake. This prelude is intended to smooth down Gaston M. Alves when I am constrained to once more find fault with his teaching in a letter to *The Photo-Beacon*, in which he says:

"Your photo from negative thirty-two times overexposed, and with normal developer, is interesting. In my experiments I have not been able to go so far with normal developer. I have only been able to overexpose some eight or ten times, without altering the treatment in the developing.

"However, by modifying the developers at the start, I have succeeded in fairly taking care of aberrations of one to eight hundred—twenty under and forty over. Professional photographers could not distinguish the prints. I found great difficulty with the twenty under—many of the negatives being fogged. But the overexposures could have been carried very much beyond the forty in a properly prepared developer.

"I regard all of this matter as extremely obscure in any really broad scientific sense. We need laborious tests and the proper analysis. We need theories which are drawn from extended facts, and not facts to serve duty to some fellow's gray matter that is pinched by a pet theory."

Now, I am not quite sure as to what he tries to make out; but if, as it seems, he believes that the admitted latitude of a plate can be divided into three, two for over and one for under exposure, I have no hesitation in say-

ing that he is far, very far wrong.

In discussing a question of this kind, however, it is necessary to understand clearly what is understood by a "normal exposure." To me a normal exposure is one that with an ordinary developer, say, that recommended by the maker of the plate; and with ordinary development, preferably the factorial, will give in the negative every degree of gradation that is in the subject, including, of course, the various degrees of shadow detail; and every degree in its natural relation to its neighbors, only the highest of high light, if such there be in the subject, opaque in the negative, and only the deepest of dark on the same conditions, anything approaching bare glass.

Such an exposure is easily recognized, and only such should be considered normal. Supposing it to be one second, and my notebook, during the last decade contains very few exposures that are shorter even in that era of rapid plates and short exposures; it will be generally admitted that by modified development an exposure of twenty or even of forty seconds could be developed into a fairly good printing negative; but that the same result can be achieved by any modification of development on a plate that has been under exposed to only half of the shorter, far less of the longer overexposure, is on the face of it absurd; simply impossible.

Although the nature of the latent image is still more or less a mystery, we know enough to say that much of the effect produced by the light during even very much overexposure can be undone by certain chemicals such as the bromides, acetone sulphite, etc., but it should not require a great

amount of intelligence to realize that unless there has been sufficient light action not only to overcome the inertia, but also to make at least some impression in even the deepest shadows no modification of the developer can bring to light a latent image that is not there. And as the definition of the normal exposure already given, which is simply sufficient exposure, is very little beyond just enough for the weaker shadows, anything less than that will not, under any conditions or modifications, give as good a negative as can be produced on it.

* * *

I had thought that the story of the connection of a Miss Warner with the Jolly-McDonough method of three-color photography had been dead and buried beyond resuscitation years ago, but it has once again been brought to life, and our St. Louis friend has been the resurrectionist. Formerly Miss Warner was to find the money to invent and construct the machine that was to rule the colored lines on glass and paper that was to make the process a commercial success; and, although we have seen and indeed possess some fairly good specimens of the result, and the method was exploited both here and in Britain, and with no lack of money at its back, it went the way of many other things that were nearly but not just

quite right. The Eastman people are not the kind to pay \$100,000 cash with a royalty of \$75,000 per annum for a process that has been found non-commercial and which in a short time will be open to anyone who cares to work it.

* * *

From the October *Photogram* I see that Dr. G. Krebs, of Offenbach, has taken out a patent in Britain and probably here also for "Trichromatic Flashlights" and colored lights that will burn for some time, under the impression that they may be used instead of the color filters or screens in three-color work. He may be all right so far as that particular use goes, but candles giving monochromatic flames are not new. If I am not very much mistaken a search in *The British Journal of Photography* will show that both flashlight and candles, the one with metallic oxides mixed with the powder, the other with solutions of them soaked in the wicks, were introduced or rather suggested, as I doubt whether either of them went further than to be shown in operation at certain meetings of societies. But I shall try to look the matter up, indeed I am not sure but that I may yet even find some of the colored flame candles, although I know that some of them were burned on Christmas trees nearly fifty years ago.

NOTES.

THE KEEPING OF BLUE-PRINT SOLUTION. We have repeatedly said, as the result of many experiments, that the ordinary blue-print solutions, the mixture of ammonia citrate of iron and red prussiate of potass, in spite

of the almost universal recommendation to mix them only just before use, may be kept in perfect order for practically any length of time; and in corroboration may say that we have just received from Mr. Henry Wenzel,

Jr., a pictorial postcard of excellent color sensitized by solution made up on February 2, 1900, five years and eight months ago. Surely a solution that will keep so long may be said to keep indefinitely.

HOW TO RECOGNIZE A LENS THAT IS ANASTIGMATIC.—It is well known that an anastigmatic lens may by careless handling be so decentred as to lose that valuable quality, hence, especially in the buying of second-hand lenses, it is well to know how easily to examine it. According to Dr. Miethe, the following may be relied on:

"The objective is mounted on the camera, and at full aperture is directed towards an optician's 'artificial star'; a thermometer bulb upon which sunlight is shining, or, failing sunlight, a powerful artificial light may be used. When the 'artificial star' is sharply focussed at the centre of the field it will form a minute round dot even with any ordinary lens, but if the lens is anastigmatic, the 'artificial star' can be focussed sharply as a round dot at any part of the margin of the field. If the star will not focus sharply as a well-defined dot at any part of the margin of the plate the lens should cover, but shows with a trail, or as a line, or as a cross, or as a pin-cushion, the lens is not anastigmatic and should be rejected. Considering that, as hinted above, the doctrine 'once an anastigmat, always an anastigmat' does not apply, the test with the artificial star should be made (with the full aperture of the lens) at close intervals all round the margin of the area it is sold to cover, as a virtual loss of anastigmatism by after strain or damage may only show pronouncedly in certain places. For critical work a

lens is valuable in proportion to its power of depicting a point at every part of the field, and any amateur can test his lens for this quality (anastigmatism) by using the optician's 'artificial star,' as recommended by *Die Photographie Industrie*. Anastigmatism is an expensive quality in lenses, and those who pay for it may reasonably satisfy themselves that they actually get it."

THE EXPOSURE FOR INTERIORS.—A. W. Swann, in an article in *Photography*, gives the following as his method of ascertaining the exposure for interiors, which, being practically that of Watkins and having tried it ourselves, we can thoroughly recommend. After speaking of the various factors which make the exposure of interiors different from those of the landscape, he says:

"Under these conditions, there is only one thing to be done, and that is to use a meter. In ordinary work, I use a Watkins standard meter, but for interiors the meter is not necessary, provided we have a refill for it, or at least a piece of the paper used in it, and a small tie clip. A piece of the paper half an inch long is quite sufficient. To use this, when all is ready for exposure, I select some part of the room which does not come within the field of view of the lens, and in which the strength of the light is about the same as that reaching the medium-lit parts of the subject. That is, not the deepest shadow or the highest light, but about midway between the two. As a rule, this is not very difficult. Then the slip of meter paper is clipped in the tie clip so that part is shielded from light and part exposed, is placed in the position se-

lected, and facing the source of light, and a note is taken of the time. The paper is looked at from time to time, and put back into the clip again in exactly the same place. As soon as there is a distinctly visible action of the light on the sensitive paper, we note how long it has been exposed. This time is equal to what Watkins calls a 'sixteenth tint.' If we have a fast plate, but not the fastest possible, in our camera, and are working at f-22, the time taken to reach this tint will be approximately the exposure required. If we are using f-32, we must give twice as long as the paper took to darken. This is sufficient guide, at any rate for the first attempts, and it has the advantage that there is no need to buy an exposure meter, but only a refill. Mr. Watkins himself advocates exposures which are a little shorter than I have indicated, but the

method described is that which I have always followed myself, and I certainly have not been troubled with over-exposure. I have seen it stated that a meter is of no use for interior work, but in my own experience there is no class of subject for which it is more valuable, because there is none in which the lighting can vary so, and can be so misleading."

KEEPING SOLUTIONS.—It is well known that solutions of easily oxidized substances do not keep so well in bottles which are partially empty as when they are full; and *The Photogram* suggests the following as an excellent method of overcoming the difficulty. Keep on hand a quantity of small glass marbles, and whenever any of the solution is poured from the bottle add sufficient to bring the solution again up to the neck.

OUR PORTFOLIO

2035. A. M. McCCLURE.—"Jefferson Co. Court House." We hardly know what to say of this except that it is a clean, clear photograph of a building just as it left the hands of the builder, without any attempt to give it a trace of the pictorial phase. It is just such as any one with a camera can make and at the same time just what most people would want if they wanted a "picture" of the county building, but there is nothing pictorial about it, while the exposure has been a little too short and the development a little too long for true values, as the shadows were never so black or the walks ever so white as represented here. But as things in this style go, it is a very good photograph of a building that, in our opinion, will not add to the fame of the architect.

2036. F. M. CASE.—"When the South Wind Blows." Just why this was photographed, or, after being photographed, why it was sent to the Portfolio, is a little beyond our comprehension. There is nothing either picturesque or pictorial in the

subject, and the photography has not added either to it. A foreground of merely passable water, a middle distance of a straight, uninteresting wall almost horizontal across the print and an equally straight row of leafless trees in the distance, all topped with a sky that seems unnatural, and, if selected, a very poor selection. Just where the "south wind" comes in we cannot see, and altogether the subject was not worth the rather more than good photography by which it has been reproduced. We had omitted to notice a little arch in the middle of the wall, and probably that constituted some of the attraction to the author. But it is worse than nothing as a feature because it is something to which the eye is led, and when so led it finds nothing on which to rest but a mass of black. As already hinted, it is a fairly good photograph of a subject not worth photographing.

2037. FORMAN HANNA.—"Mountain Pool" is surely a misnomer so far as this print is concerned, as water cannot be rep-

resented properly by simply blackened paper. Neither can boulders be represented by a white cap or surface where direct light has fallen and all below as black as platinum paper can be made. Instead of 1-25th of a second, as this seems to have got, judging from the result, it should have been at least two or three seconds; anything less being, as this is, simply a waste of good material. Why you and many such cannot see the folly of such short exposures puzzles us beyond measure, as you cannot suppose that under any circumstances water can be properly represented by black paper.

2038. F. F. SORNBERGER.—“A Shady Landing-Place.” A grassy foreground, with a big tree, a river and a boat in the middle distance and a wall of foliage behind, combine to make one of the simplest and most attractive pictures that have come to the Portfolio for some time. Rarely has the “beauty of simplicity” been better shown, and when we say that to that has been added the two main things in success—sufficient exposure and the use of a lens of sufficiently long focus—the secret of the success has been largely accounted for. We like the picture very much and each time we go to it the better we like it, one of the true tests of quality in pictures.

The only fault we can find is in the color and that is mainly a matter of taste, although the dull brown is to us the least suitable for such a subject.

2039. FRED ZIEGLER.—“The Heart of the Wood.” Just what you saw in this to make it worth photographing is a puzzle. It might have been the larger tree on the right, but then you would have given it prominence, throwing all the rest a little out, while here everything is about alike, even to a want of definition that is itself a fault. You should learn to focus better, at least on the most important objects, to concentrate instead of scatter your lights all over the subject as they are here, and also and especially to see, that is, to recognize, the pictorial or what can be made so in a photograph.

While we should not have selected this as a good subject, had it been desirable or necessary to photograph it we should have placed the larger tree a little nearer

the center or not quite so near the margin, and with a view of naming it, say, “The Father of the Forest,” and focused for it and its foreground, using a stop large enough to get all beyond it a little out. Then we should have waited till the light was to our satisfaction, surely not such as now, when it is scattered in flecks all over the paper, and should have exposed long enough to give in development all necessary detail before the lights were in the negative altogether opaque. In other words, we should have given prominence to the big tree and subdued all else, making something very different from this.

2040. E. H. PIERCE.—“The Framer.” The first impression made by this is that the situation must be in one of our greater cities, where real estate is at a premium, everything being crowded into the smallest possible space; the second that the “framer” has drifted into the business rather than having been bred to it in the usual way, his equipment gathered from things originally intended for other purposes, such as benches converted from tables with turned legs, etc., etc. Be that as it may, the result from a pictorial point of view is not so good as it might easily have been. Three benches, a large stock of frame mouldings and a litter of the usual essentials and things not essential on floors and walls, so fill the place as to leave little else than “standing room,” and make it difficult to let the eye rest for a moment on the really fine figure of the workman. Covering up as far as possible the scattered high lights so as to study the figure without distraction, we have nothing for it but praise. The large stock of mouldings are easily accounted for. He is evidently not one who would over-stock himself, and therefore his trade warrants the stock; and that his heart is in his work is shown by the fact that although he knows the camera is on him there is none of the self-consciousness so evident in most portraits made under such conditions. He is one of the few models that share with the artist the honor of the success, and here they have both been more than usually successful.

Briefly, as a picture it is overloaded with useless matter, and especially with matter too high in tone, that is, too white, from

No. 2042

J. W. Roeschlaub

a pictorial point of view, but as a photograph of the technical order it is very good indeed; a fine photograph that with only a tithe of the surroundings properly arranged might have been a fine picture.

2041. J. W. ROESCHLAU.—"The Rehearsal," a girl teaching a dog to catch a round piece of sugar lying on its nose in the usual way, is excellent both in design and execution except for the scattering of the points of light through the foliage which forms the background. These, while not generally injurious, happen to fall on and around the head and face of the dog, making it difficult without careful examination to see where they begin and the face ends. So much do they interfere with the form of the face of the dog that until a lens was used we could not find the face. Once seen, however, the difficulty vanished and the picture told its story very well; and if the troublesome lights had been removed from the negative, or been touched out in the print, we should have had nothing for the picture but praise. Subject, arrangement, and photography are all good, and it is refreshing, amongst so many under-exposures, to find one that has got sufficient exposure. Before, however, making more prints from the negative, lower the tone of the clapboards of the house immediately below the lower jaw of the dog,

so that it may be seen standing out as it should be.

2042. MARTHA ROSENSTRETER.—"Portrait" is a group of two, one reading, the other looking on, but the definition is such that both seem to do both with shut eyes. Then, the figures are broken up by three plants in pots placed in front, no doubt with a view to effect, but the effect is bad. Never forget that the simpler you can make a picture the better it will be, as here, without the disturbing plants making us wonder what they are doing here, and the focusing a little better, it might have been very good. Try again, discard plants and table, and with better focusing and a longer exposure you will have a good group.

2043. CARLE KREBS.—"Going for a Boat Ride," a lady steadying a boat with an oar while on a landing stage preparatory to stepping in, is a little out of your usual style, not that we have any objection to the better technique, although we think your past were more effective than your present, and that they will remain when the present is forgotten. By this we do not mean to undervalue the "Boat Ride." Having selected the subject, you have probably made the best of it; but the landing stage or board walk, with its repetition of lines, is suggestive of the artificial or

No 2043.

Carl Krebs

mechanical; and, to us at least, deprives the picture of much that it would have had without it. It is a very good photograph of a subject that does not appeal to us, probably because everything is seen at a glance and there is nothing suggested, nothing left to think about.

2044. H. H. HARVEY.—“Group,” two adults and two children, each intently sitting to be photographed, although the heart of the elder of the latter is too full of fun to keep serious long enough, as is shown by the merry twinkle in both eye and mouth. The print induced us to hunt up one taken just fifty-one years ago, when we and ours sat in exactly the same wooden position and in exactly the same grouping. This print is not nearly as good as might be got from the negative, the gradation having been contracted to the smallest possible degree, nothing higher than a half-light and nothing lower than a half-dark. Technically, then, it is a very poor print from a negative that could be made to give one very much better, and artistically the figures are too wooden, too much showing that they are being photographed, and the arrangement of the various folks, big and little, is too mechanical. The arrangement of such a group is a difficult matter to get free from the mechanical, but there is the more honor and credit when it is *well* done. Try again, try

all kinds of arrangements until you hit on one that feels as if you know nothing about being photographed, and above all do not tell the pretty little ones to keep still and look at the camera. Your photography is all right, only make your grouping and expression good and we shall have nothing for it but praise.

2045. J. C. O'CONNOR.—“A Kentucky Lane” is a charming picture and the oftener we go to it the better we like it, and yet, strange to say, a part of the charming effect is produced by what we have a difficulty in deciding whether it is a field or a sheet of water; and that not because there is anything of the impressionist about it, the technique being such as to please the most earnest advocate of straight photography. We decide in favor of the field, however, and only wish there had been a few cattle in it. Skirting the field in the distance on the right is dense foliage, and equally so on the left, and in and through this is the lane or path that gives the picture its title. It is a beautiful subject from a fine point of view, and altogether it is one of the best pictures that have come for a long time. We may add that it is on rough paper toned to a sepia and in some parts verging a shade into the purple, not enough to be double toning but only suggestive of shade, and that the atmosphere is unusually fine.

WITH THE CAMERA CLUBS.

Secretaries of Societies, or Camera Clubs who want their meetings reported or who have communications of interest to photographers that they wish to have published should send them direct to Dr. John Nicol, Tioga Centre, N. Y.

Toledo Camera Club.

The first Fall meeting of the Toledo Camera Club was held at the Museum of Art, Wednesday evening, September 13th. A large number of prints were exhibited, the work of the members, made during the Summer months.

The Exhibition Committee reported the fact of the club receiving three first and one second awards, to wit: First, Snow Scenes; first, Child Studies; first, Landscapes, and second on Portraits, at the First National Convention of the National Association of Amateur Photographers of

America, at St. Louis, July 29 and 30, 1905.

J. F. Jones, L. B. Busse and George Stevens were appointed a committee to stimulate interest in lantern slide work and to arrange for the club's exhibition in November. This will be preparatory to the annual exhibition of the club in February, which will be open to the club members, members of the Art Museum and friends on invitation.

A committee was also selected to secure awards for the three best pictures to be selected from the work of the members made and exhibited during 1905. The first

prize will be a handsome silver cup, the gift of A. M. Woolson, now held by J. F. Jones. This cup is competed for each year, unless a member wins it three times. Two other prizes will be selected by the committee.

C. C. Taylor was instructed to arrange

for an exhibition of prints to be sent to the annual convention of the National Association of Amateur Photographers of America, to be held in St. Louis next Summer. Special contests along restricted lines will be held each month this Winter by the club.

OUR TABLE.

Books for review and apparatus and material for examination and report to be sent to Dr. John Nicoll Tioga Centre, N. Y.

WITH THE CAMERA.—The monthly circular from the Illinois College of Photography tells of the Bissell College of Photo-Engraving having now been removed to the Austin College building, in which is to be found everything that could be desired for school and shop work; everything required for the teaching of both the theory and practice of the art. The College Camera Club is going on as enthusiastically as ever, and Mr. Bissell has just presented it with some useful furniture for the operating rooms.

It tells, as usual, of visits from former students and others who have made favorable beginnings in active life both in studios of their own and as assistants. Photographers throughout the land are learning the value of assistants trained at the college and they have less trouble in finding berths than their less fortunate brethren.

* * *

RUDOL.—Just as we are going to press we have received from G. A. Crayen, of 71 Barclay street, New York, a sample of this new developing solution, made by Dr. L. C. Marquart, Beuel on Rhine. Rudol is in concentrated form, one part to be added to four parts of water and one of a 10 per cent. solution of potassium carbonate, and is said to be superior to anything of the kind hitherto introduced. A hasty test has shown it to be an excellent developer for normally exposed plates, but good developing agents are now so numerous that this is no praise, and we will put it to more severe tests in the hope that we will discover special qualities. These we are assured it possesses, and we shall report at length in our next.

PARAGON PRINTING-OUT PLATES for opals or transparencies are just the thing for the coming Christmas season. They look rich framed in plush or on an easel and are simplicity to work compared with carbon. Slide-makers will also do well to try the print-out slide plates. The color and quality of the gold-toned slide makes the gelatino-bromide slides look sick.

* * *

Generally speaking, a catalogue does not make interesting reading. Its province is rather to inform than to interest, but if put up attractively and in logical form it frequently draws attention from even disinterested people. A case in point is the new Handbook of the Obrig Camera Company, 165 Broadway, New York, which has just reached our desk. This catalogue of photographic supplies is very complete and the prices are all given net, which is a great help to the buyer. Amateurs will find a whole lot to interest them in this book and we recommend our readers to send for a copy and also for a copy of Down Town Topics, the bright little house organ of the same firm.

Death of W. H. Walmsley.

Mr. W. H. Walmsley, the well-known optician, died suddenly at his home in Philadelphia, Sunday evening, October 22d, in his seventy-fifth year. For nearly forty years Mr. Walmsley was engaged in the optical line, and recognized as an authority in microscopical and photographic work, his specialty being photo-micrography. He was an active member of Jas. W. Queen & Co. in the early days of that concern.

Later he associated himself with the well-known house of R. & J. Beck, London, and in a short time built up an extensive demand for that firm's product in the United States. His success in introducing the Beck lens is a matter of history among the stock dealers of this country. He afterwards organized the firm of W. H. Walmsley & Co. and conducted a general optical business and also handled photographic

goods on a large scale. He had recently been associated with Prof. John MacFarland in the Biological Department of the University of Pennsylvania. Mr. Walmsley was a contributor to various scientific and photographic journals. He was the founder of the American Microscopical Society and a member of the Royal Microscopical Society of London. His loss will be mourned by a host of friends.

Is it Worth While? Yes.

Dear Sirs—I was very much interested in the article in the last number of the *AMATEUR PHOTOGRAPHER* by Via Media. I certainly agree with all that this writer says with the exception of his remarks on backed plates.

I think altogether too much value is given to the backing. In some photographs, as for instance a white house against a deep blue sky, and also landscapes where near-by trees are against a deep blue sky, there is no question but that a backed plate gives better results, but outside of such as these I do not think that the backing is worth while. Using the Newcomb coating or any other that I have been able to get is dirty work both putting on and taking off. It makes more work and except in such cases as I have mentioned above I have never found it to be worth while.

Take, for instance, photographs of machinery, particularly machinery with polished parts; one is supposed in such photographs to use a double-coated plate or a single-coated backed plate.

I enclose herewith two photographs of machines taken under what I consider the worst conditions. These are not first-class photographs, but are sent simply to illustrate the point in question. Both of them have been used until they are dirty. On both of these machines particularly, all of the upper part of the works are polished, as also the upright. All other work is painted

a shiny black. The machine set within six feet of a row of windows and the sun was shining brightly, as you will note by the floor. The longer machine is 54 feet long, and in order to take it in the room it was situated in, the camera was placed within 12 feet of one end. I have always been told that in such work it was absolutely necessary to use a double-coated plate, yet this was taken under the conditions above noted on a Stanley 50, yet I do not see how you could ask for a better gradation. The shading in this respect I think is all that could be desired and I would like to have your opinion on both of these photographs. I do not say that they could not be improved, although the engraver that made half-tones of these stated that they were the best negatives that he had ever had to work from and that if they did not have good results it was surely up to them.

I also enclose a half-tone which was made from the larger of these photographs without any retouching of the photograph whatsoever.

I should very much like to hear from you on this subject and have your criticisms of these machine photographs. I have put a portfolio coupon on one, and as the other is the same machine except longer I trust you will be willing to pass judgment on both. Very truly yours,

C. R. B.

[Our correspondent, connected with probably one of the largest makers of

cotton machinery, has ample opportunity of photographing machinery and finding out the best conditions for that purpose; and while the print from the negative referred to and half-tone made from it seem to warrant the opinion of the engraver, we say without hesitation that, good as it is, and it is good enough for any purpose, it would have been a little better on a backed plate. The covering up nearly to the top of the row of windows prevented the halation that certainly would have appeared without such covering, the evidence of which is to be seen on the side and above the little part of the near window that is uncovered.

While it is true that in most landscapes in which there are no branches against the sky such halation as there is may not be noticed, there are few cases indeed where if two plates are exposed together and treated exactly alike, the one backed, the other not, in which a careful examination will not show a decided difference in favor of backing. No doubt, backing is a little troublesome and a little messy in the hands of most people and with most backings, but the ruby varnish made by the Bayer Company, simply pouring it on and off in the old collodion way, reduces coating to the minimum of trouble; and it comes off itself in the developing solution, the coloring thereof being a benefit rather than a fault, as it secures freedom from fog even with a light that without it would be very far from safe.—Eds.]

Where Two Heads Are Worse Than One.

Dear Sirs—Having read your magazine for over eight years and been especially

interested in your criticisms in "Our Portfolio," mainly because it has been of such value to me, I want your opinion on a thing that has recently troubled me much. Being specially interested in groups, I have always noticed that you have invariably found fault with the placing of two or more heads in a vertical line, and you have always been so strong in your statements that I had accepted it as one of the unbreakable laws of composition.

But in a recent number of one of your contemporaries, in which a "professor," I understand, in one of the colleges of photography has been writing a series of articles, he gives an illustration, a group of four figures, and two of them are in direct violation of that law, the one being directly above the other. Now, you cannot both be right, and I want to know what you have got to say for yourselves.

Yours truly,

HERBERT SPENCER.

[We noticed the illustration to which you refer and were about as much surprised as you seem to be. For most of our criticism we claim no more than that it is our opinion, and that we are no more of an authority than the next; but on the question of the vertical placing of heads we say without hesitation that the "professor" is altogether wrong. From time immemorial such placing has been recognized as a mistake, and one that is never made by any artist worthy of the name. The teacher in question may be safely followed so long as he sticks to making of the negative and the lighting of the portrait, but he should leave art alone.—Eds.]

Enlarged Negatives.

MARTIN DOSCHER.—It is not only easy but becoming almost universal for exhibitors in the principal salons to make their large pictures from negatives enlarged from

small negatives, 4x5 and 3¼x4¼, the latter more frequently than the former. The ideal outfit would be a 4x5 camera with an anastigmat of not shorter focus than six and a half inches, and to confine the subject by half an inch each way of the

plate. Getting a thinnish negative full of detail and perfect gradation, which means sufficient exposure, we should prefer to make an enlarged positive, work on that as much as might be necessary, and from that a negative on paper by contact printing. This will give, even in hands that have not had much experience, negatives suitable for prints of the very highest order, although it is true that some of the gradation may or rather will be lost in the operation. The other way, preferred by some as retaining every trace of gradation, is to make a small positive by contact, but on a piece of carbon tissue, that being generally understood to give, say, thirty, as compared with fifteen or sixteen degrees of gradation on bromide paper. From the small positive the enlarged negative is made, generally on a slowish plate; but we have experimented to a considerable extent with both methods and we cannot say that one is better than another, both yielding first-class prints. See several articles on enlarging in our forthcoming "Winter Work."

Under-Exposure Again.

G. R. WRIGHT.—No. never hesitate to tell us when you think we are wrong, as, if you are right, we shall be glad of the information, and if it should be you who are in error, as you happen to be now, we shall try to put you right. It was not over-exposure that caused the whiteness on the fence, the road, and the sky; and it is quite true that if you had given a shorter exposure they *might* not have been so white, *but only if you had stopped development in time.*

To understand the question properly you must keep in mind two facts connected with exposure and development. First, that there is in the sensitive film an inertia that must be overcome before the light can produce a trace of the latent or developable image; and secondly, development on such parts of the film as have had the inertia overcome and an image produced is cumulative; that is, the longer development is continued the more opaque it becomes. Keeping these two facts in mind, you will be able to understand what follows. When the exposure has been too short, or the light too weak, which comes to the same thing, to overcome the inertia

and make a developable image in the darker shadows, there is nothing on those darker shadows, and very little in those that are less dark, to develop, the consequence being that development is pushed further and further in the hope of getting what is not there to get. And it is here that the cumulative action comes in. The higher lights, even down to the half-lights, would have each been found in its true gradation had development been stopped in time, and that time would have been when, with proper exposure, the details in the shadows made their appearance. But you had not given the proper exposure, not nearly long enough, and the shadow detail did not appear. You persevered until all the lights, from the highest, the white-washed cottage, down to the half-lights, probably the sandy road and the fence, were all equally opaque in the negative and equally white in the print.

Private Criticism.

PAUL PRY.—(1) See "Winter Work" on another page. (2) Old negatives, especially the small sizes you have, are worthless; you couldn't give them away, far less get anything for them; but if you care to throw away the cost our publishers will gladly insert the advertisement. (3) If your dealer does not stock the varnish you should send to the Farbenfabriken of Elberfeld Co., 40 Stone street, New York. Ruby varnish is a sufficient title. (4) For some years we have been in the habit of giving private criticism of four prints when accompanied by a fee of one dollar, and the prints are returned only if stamps are sent for the purpose.

Legitimate Faking.

(Miss) H. E. SEYMOUR.—For various reasons which we have not space here to explain, there are few negatives that cannot be improved upon, either in printing or before; indeed, sometimes both plans are employed. Probably the simplest is to coat the back of the negative with matt varnish, to be got at any of the stock dealers. This, when quite dry, may be wrought upon with the pencil or black lead on a stump to lighten shadows or alter the tone of parts; and tones may be lowered by scraping away some parts of the

varnish. In some cases it is an advantage to slightly tint the varnish by a few drops of either red or yellow alcoholic solutions of aniline colors.

Never mind what your "artistic" friend says about straight photography; you don't need to be a straight photographer unless you like, and the negative is merely a means to an end, the end being a picture with as much of art into it as you can impress. Zola says: "Art is nature seen through a temperament," and so your aim is to reproduce nature not as it is but as you see it, and it does not matter by what kind of photography or by photography plus anything else that will help you to reach your aim.

Reliable Corks.

FLORA WINTER.—Many glass stoppers are insufficiently ground into the mouths of the bottles, so that good corks are more reliable for volatile liquids. They should, however, be soaked for an hour in melted paraffin and then well wiped. The corks should be of the quality known in the trade as "velvet," and nicely tapered.

Relative Aperture.

JUNIOR.—Your professional friend is not as clever as he thinks, although we did not believe that any one who lives by the use of the lens could have been so ignorant as he shows himself to be. Instead of "showing up the cads who write in the journals," he shows up himself; shows that he did not know that in copying a picture to about full size the f-8 became close to f-16, and that instead of the nearly two or three times slower than the "cads" asserted, it really was, according to their assertion, four times slower. In other words, the 16-inch lens with a two-inch stop, which he had been told was f-8, became, when the focus was extended to copy full size, f-16, and required just four times as long.

Bromide Enlarging.

BROMIDE.—The answer to your question depends altogether on whether you are likely to want only one or several enlargements. If only one, then to enlarge on bromide paper with an enlarging lantern or a temporary substitute is the better because the simpler and cheaper way. But

where several enlargements are required,—and when or who shall say they may not be?—then an enlarged negative is to be recommended. Indeed, the whole method is so simple and so certain that we never think of a bromide enlargement even where we *think* only one will be wanted, but make an enlarged negative, and never, or hardly ever, does it happen that more than one are not wanted. During a series of articles on Winter work which will appear in the next and succeeding numbers, we shall again deal with the best methods for the making of enlarged negatives.

Nude Figures.

MARY L.—Yes, the photograph is pretty; indeed it is more than that—it is really artistic and probably less open to fault-finding than most nudes. But think a little. Would you, now that you are grown up to womanhood, care to see a portrait of yourself taken just in this way and at this age? If you are the kind of girl we think, we know what the answer will be, and that the negative will be destroyed and all the prints therefrom, and that never again will you make another such.

Stick to One Developer.

BUSTER BROWN.—Any one of the three developers is just as good and no better than either of the others. It is not the formula but how it is used that tells, and we should say the same if you were to submit a hundred. Adopt either and stick to it till you have mastered it—that is, till you get just such negatives as you want—always keeping in mind that on the exposure, and not on anything else, depends the value of the negative. Employ one or other of the exposure meters, those that are also actinometers, and when you can make sure of your exposures the development will be found to be a merely mechanical operation able to take care of itself.

Bichromate Poisoning.

W. LAMONT.—See "Note" on citrine ointment on another page; and rather than abandon such a beautiful printing method as is carbon, wear rubber gloves while sensitizing; they are not needed in developing.

V. Von Glöden
Italy

Second American Salon

FAR FROM THE VILLAGE SCHOOL

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WINTER WORK.—II

By DR. JOHN NICOL.

LANTERN SLIDES.

HE first essential in the making of good lantern slides is, of course, a good and suitable negative; and that requires more consideration, as is too evident from many of our slide shows, than it usually gets. The trend of photography, however, at the present time, or rather during the past Summer, has been more than ever before favorable for this work, most or at least many of the best workers having adopted the making of small negatives for enlargement, and those best suited for that are just the kind wanted for the best slides.

It should never be forgotten that the slide of about nine square inches is to be magnified to about one hundred square feet, and that a degree of definition sufficient or even desirable for printing or ordinary enlargement would be simply intolerable in the larger size. Nor should it be forgotten that a flaw or speck that in a print would be unnoticed will, when so magnified, utterly ruin a slide, nor

that none or hardly any of the dodges admissible on prints would be tolerated on a slide.

The negative suitable for slide-making, therefore, should be rather on the thin than the dense side, should include the full range of gradation that is in the subject, without a trace of clear glass or an opaque part unless it included objects perfectly black and perfectly white, neither of which are frequently found in nature; and at the same time must be free from fault or failure that cannot be so removed as not to be visible on the magnified image.

Careful examination will probably show that amongst the improved negatives as noticed in our last only a few will stand the test, but, few or many, they should be rigidly adhered to, as no slide is far better than one that has to be apologized for. The next step is the selection of the slide plate, and of these there is a large choice. We have used almost every one on the market, and while they differ much in properties and pecu-

liarities, we can honestly say that we have not found one that is better than another, or from which a good slide may not be made. Our advice, then, is to select a brand and stick to it till you have got thoroughly acquainted with its peculiarities; until, in fact, you are a good slide maker, and then and only then you may experiment to your heart's desire.

The next question is as to the method, whether by contact printing or copying in the camera. Much has been written as to the comparative merits of the methods, but we are safe in saying that to those properly acquainted with both the one is as good as the other, and to them it is simply a question of the size of the negatives. When the subject is within the three-inch space the contact method, while equally efficient, is vastly more convenient, but when it is larger and must be reduced, copying is a *sine qua non*. With this more convenient method, especially as those who are likely to be slide makers are just those who have been making small negatives either for the purpose or for enlarging, we shall deal in this article, taking up the copying method in our next.

Plates and negatives having been provided, the next step is the consideration of the developer, which should be a good standard formula, never varied, but the exposure made to suit it. What that developer should be is of less importance than that it should be adhered to, although the slide maker may have two developers, one weak, the other strong, the purpose being to vary the color of the resulting slides, strong developer and short exposure tending to black, and weak de-

veloper and long exposure giving warm colors.

While, as we have already said, almost any of the modern developers, including pyro, and almost any of the formulæ given for their use, may answer well enough, the following has always given us all that we could desire:

Edinol	40 grains
Hydroquinone	20 grains
Sodium sulphite (xls)	240 grains
Sodium carbonate "	240 grains
Potassium bromide...	10 grains
Water	20 ounces

This, with properly arranged exposure, will give on most slide plates fine velvety black tones, and if diluted with equal, two, or three parts of water and exposures suited to the various dilutions will give various shades of warm browns or reds.

In speaking of plates we had omitted to say that backing was a *sine qua non*, as any member of the slide interchange cannot have forgotten who saw the example sent by, we think, the Orange Camera Club, one-half of which had been backed and the other not; and the difference was such as never to be forgotten and to induce every slide maker who saw and understood it never to expose a lantern slide plate without backing. What the backing shall be is of less importance—almost anything that will destroy the reflecting surface of the glass will do, although we may say that we have used with satisfaction for years that made by Mr. Pancoast, of Philadelphia, and known as Red-field backing. It is a thick molasses-like fluid, easily applied, and dries very quickly, so that a few dozens may be backed and dried in an evening.

The next thing requiring considera-

THE SONG OF SPRING

Second American Edition

**Mrs. G. A. Barton
Birmingham, England**

tion is the light. It is of little consequence what it is so long as it is steady and uniform; that is, that it shall be as far as practicable the same all the night and from night to night, so that the exposure once ascertained shall be the exposure for all time. And this brings us to the exposure and how to get at it. The first essential is a time meter, and nothing is better than a pendulum, a stone at the end of a string 39.5 inches long and so swinging seconds. As to the light, in the absence of anything better an ordinary kerosene lamp, with, say, an inch wick, in the ordinary darkroom lantern answers admirably. Thus provided, the next step should be to select an average negative and, placing it and one of the plates in the printing frame, put the latter on end at a given distance from the light and give exposures varying from, say, ten to forty seconds, in the well-known way by slipping a card across the front of the frame. Perfection may not be reached by the first or even the second experiment, but keeping in mind that perfection of the slide depends on perfection of the exposure, the expenditure of a number of plates brings with it its reward; nor is the reward confined to exposure, as the development of such varied exposures teaches much that is never forgotten.

Just what the distance between the light and the printing frame should be is not so easily ascertained, there being a belief that it should vary with the density of the negative, nearer when it is dense and further when thin. It is well to have a certain place for the lamp and a series of easily seen lines at equal distances from it drawn on the work table, say at 6, 12, 18 and 24 inches; and as light dimin-

ishes according to the square of the distance, it is easy, knowing the exposure at one, to find what it should be at all. It is true that Sir W. Abney found that in printing delicate films the distance rule did not hold quite accurately, but the error is so small as not to interfere in the printing of films so slow as are those of lantern-slide plates, the irregularity being much less than the latitude.

Correct exposure having been ascertained, the work may go on swimmingly. Our method is to print the evening's work, as many slides as we intend to make, one after the other, and then develop in the same way. Our lantern, or rather light-box, is home-made, with an 8x8 light of clear glass, over which there is a sliding screen of orange glass dark enough to be perfectly safe and at the same time to give plenty of light for changing the plates. The lamp is an ordinary kerosene, "kitchen" variety, with a reflector; and with a medium negative on Eastman plate now over eleven years old the exposure at eighteen inches from the light was about twenty-five seconds.

Nothing in photography is more beautiful than the appearance of the positive image, dark on a white ground, and as it comes more and more into view we never tire admiring it. The first thing, of course, is to clean off the backing, and it is well as far as possible to do so without letting the water touch the face of the plate, and if it does so, the whole plate should be moistened. The "first appearance" differs considerably from that on a negative, the whole image coming more together; and just when to stop development is one of the difficulties encountered by the slide

ILLUSTRATION FROM THE
RUBAIYAT OF OMAR KHAYYAM

Second American Salon

Adelphi Hanscom

maker ; but in this, as in exposure, it is better to over than to under do. Indeed, some excellent slide makers over-develop on purpose, believing that by reducing in daylight they can hit the desired density better than under the orange light. Slow as most of the slide plates are, and safe as the orange light is, the less they are exposed to it the better, as a slide developed altogether uncovered is grayer than one that has been covered during most of the time of development. This brings us to the fact that in transparency as well as negative development the factorial method is available. Careful observation will in a short time enable any one to know just what the factor of his developer is, and he may then with perfect confidence watch for the first appearance and then cover the tray till within a few seconds of the factorial time before he examines the positive by the transmitted light, and if all has gone well the slide will have every degree of gradation that was in the negative without a trace either of clear glass

or perfect opacity, unless there has been in the subject an object in the highest of high light and something in the deepest of deep shadow.

From the developer the slide, after a little washing, is transferred to the fixing solution, which should be of the "acid" variety, and left there for at least as long after the white film has disappeared as it took to remove it, under-fixing being one of the dangers to which a slide is liable. Thorough washing and drying in a place free from dust completes the slide so far as photography is concerned, but its finishing to be in readiness for exhibition must be reserved for another chapter.

We had forgotten to say that the printing frame should be a size larger than the slide plate, and even than the negative, if it should be small, the object being that the one may be moved upon the other so as to straighten bent lines or select only the portion of the negative to be included in the slide.

THE PRESS VIEW OF THE SECOND AMERICAN SALON.

By ROLAND ROOD.

On November 21 the American Salon gave a press view of those pictures which have survived the censure of the various painter and photographer juries to which they were subjected. The conception of having this double jury appears to me excellent, for the photographers, judging first, would naturally (or at least should) look for the mere photographic qualities and pass on to the painters only those prints in which

such qualities existed, and the painters, on their part, would, knowing nothing of photography, select according to the pictorial qualities ; and thus, in the end, there would remain only those pictures which were best both technically and artistically. That this idea was rigidly adhered to I have every reason to believe, and I feel certain that the visitors to the exhibition will see the best of what was sent in.

At the press view the frames were

THE FLATIRON IN A SNOWSTORM

Second American Salon

Dr. Albert R. Benedict

unhung and, therefore, seen at a disadvantage, but I am sorry to say that the exhibit seems to fall a little below the one of last year. The absence of examples by Seeley, Mrs. Bennet, and one or two others, considerably lowers the tone. And if you think for a moment you will recognize that it is always the few highest on the ladder of excellence who lend a luster to the others. I can remember several occasions when I visited the Salon of Paintings in Paris and found the show of two thousand paintings charming, and yet, when I came to examine, there appeared to me not more than fifty pictures worth looking at. But these fifty were all that was necessary. Their presence put my mind in such pleasant humor that I thought the

others better than they were. Not merely in judging paintings do we unconsciously fall into the habit of condemning what may really contain a considerable amount of merit because our enthusiasm has not been sufficiently awakened by the presence of masterpieces, but also in judging all departments of intellectual output are we guilty of this fallacy. Take the single name of Balzac from French literature, or those of Goethe and Schiller from the German, and we would alter our tone of speaking of those literatures to an unwarranted degree.

So I would caution you when you go to the Salon not to condemn at first sight, but to look carefully and you will find that there is in truth

A STORY FROM THE GOOD BOOK
Second American Salon

Wm. H. Zerbe
Metropolitan Camera Club

WRESTLERS
Second American Salon

V. Von Gloeden
Italy

ILLUSTRATION FROM THE
RUBAIYAT OF OMAR KHAYYAM
Second American Edition

Adelaide Hanscom

WHEN LIFE IS A PLEASURE
Second American Salon

Henry Berger, Jr.

more earnest effort this year than there was last; more evidence of work and thought, and less of haphazard and triviality.

An astonishing feature, however, is the superiority of the European work over the American, and of the European work I found the Italian the more interesting on account of its directness. The Italian work, though—and this is frequently characteristic of any “better” class—is also the worst. In it are found just as many complete failures as successes. These failures are worth study, when taken in conjunction with the rest; for many of them have failed, not because of any inartisticness of motif, but because of the great difficulty of achieving suc-

cess in the direct manner that has been attempted. The absence of mist and mysteriousness of any kind, the avoidance of the use of confusion and obliteration—which are really very cheap methods of appealing to the imagination—are characteristic of these works, and conduce largely to their goodness as well as their badness.

Among those in the American part which are worth study are the following; and these following I select, not because they number all the best—there are others as good—but because they will give a general idea of what is being attempted by the Salon and of what the Salon is trying to stand for. First, Mr. Curtis Bell's “Evening” (a few flat tones, beautiful in

IN MY STUDIO

Second American Edition

Rudolf Eckmeyer, Jr.

LANDSCAPE

Second American Salon

Wm. T. Knox

gradation and just in value, composed in the simplest manner and yet the reverse of commonplace), reaches about the high-water mark of the exhibition. It is what is being striven for, but will necessarily be of slow attainment to many; for it is art; in it matter and manner meet. The technique and the esthetic qualities are the same; alter the technique and the story will be another one. It is pictorial; the "photographic" is eliminated; and it represents not nature, but what Mr. Bell thought about nature. It is the sentiment he attributed to nature, and in it we see a part of his personality. I prefer it to the prize-winners.

Of W. A. Boger's "Portrait Study," although slighter in effort than Mr. Bell's "Evening," much the same may be said. It is a picture, and if you note carefully you will find that the staircase ascending into the gloom is just as fascinating as the boy (and it was really quite uninteresting in Nature), and this because in it, just as much as in the boy, we feel the first requirement of all art, namely, the imagination of the artist.

"Das Wunderkind," by Fedora E. D. Brown, is again a picture, and so is the Parrish Sisters' "Millicent," although only a portrait study; and also a portrait by Virginia M. Praal is more than a mere portrait. But, as a rule, the photographs, although well enough composed and sufficiently true in values, etc., remain "photographs." And in "The Little New Comer," by Mrs. W. W. Pearce, and "The Bather," by Dr. A. Wilhelmj, and many others, we never quite forget the paper on which the print is made; and it is rather more our reasoning faculties that are appealed to than our emotional. Now, I admit that it

is immensely difficult to accomplish with machinery and chemicals what I am advocating; but it can be done, and has been done, and must be done, and done much more frequently than by the present exhibitors, before the public will grant that a photograph can be anything else than a photograph. Bell's "Evening" is undoubtedly art, but when I look at his "Woodpile" I almost wonder if his art is not an accident (which, of course, I really know it isn't); but many of the public will not reason as I do, and will be more apt to look upon the "Evening" as a lucky hit rather than upon the "Woodpile" as one of those numerous failures which every photographer must make, owing, not to the inherent impossibilities of the art, but to the inherent great difficulties.

Fedora E. D. Brown does the same thing. Her "Wunderkind" is all light and air, but suddenly she drops us into an altogether too solid clump of "Elms by the River;" and this need not at all have been, for she could have just as well made her personality felt by the riverside as on the child's head.

There is another graver fault which I have to find with the Salon, and that is the silly way in which certain of the exhibiting photographers try to exchange personalities. There is "A Costume Portrait," by Eickemeyer, which looks like a "Herzog"—or am I mistaken, and does Herzog imitate Eickemeyer? There is a Bell, "Adirondack Lake," that looks like an Eickemeyer, and Fleckenstein is trying to look like Seeley, and others are doing the same thing. Now, this is not art; it is play, and makes painters cry out: "Why, this is not art; it's a trick; all you have to do, to change your personality is to change your

focus, exposure, developer, printing, etc., and you become another person." And they are right. Just for an instant imagine Rembrandt painting like Holbein, or Holbein like Titian. It's ridiculous. Rembrandt painted as he did because that was the way he saw Nature; just so did things look to him; and no more could he have seen as did Holbein than could a cat suddenly become fond of swimming, or fishes acquire the habit of sitting on the branches of trees and singing. It was the intense conviction of these men that Nature was exactly as they portrayed it that made them paint; they felt that the world outside of them was intensely beautiful and that they must transfix it to canvas that others might also see and know. By this I do not mean that a photographer should not photograph the same *things* another one does. Turner painted *all* landscape, but I have never seen a Turner which looked in the slightest degree like a Crest or a Constable, or vice versa. In everything Turner did you feel *his* version of Nature; you feel *him*; and it is this ever-present personality that makes his work art, and not photography, and gives it value.

The worst of it is that these Salon imitators do it so badly you feel in a moment that they are not themselves. The Bell looks like a bad Eickemeyer; also H. Hendrikson's "October Morning" like a worse Eickemeyer; the Eickemeyer like a still worse Herzog;

and the Fleckenstein's like——. I would really rather not use the language and say what kind of Seeleys they look like. The great questions that every artist must put to himself are: What does Nature look like to me? What are her moods that speak to me? When are the moments that I most lose myself in her?—and then go ahead and portray those moods and moments just as they are. It is all right enough in your studio to try and learn something from others by making copies, but these copies should never be exhibited, or else you will lay yourself open to the charge of being copyist and not artist. I admit that there are certain temperaments who really cannot of themselves come into direct contact with Nature, but who can feel Nature strongly *through* another, and when this "other" is expressing himself through a different medium—as, say, through poetry—these temperaments may, through the poet's influence, still portray Nature, but Nature always imbued with the poet's personality. Such are the illustrators; and it is for the very reason that because they have not directly seen Nature, but have seen through the eyes of others, that they take an inferior rank. Still, they are artists and not imitators. Example of such work, and good, too, are the illustrations Miss Adelaide Hanscom has made to the Rubaiyat of Omar Khayyam, and which form part of the present exhibition.



WORDS FROM THE WATCH-TOWER.

BY WATCHMAN.

THE so-called spirit photographs noticed last month are still an attraction in England. *The British Journal of Photography* has reproduced one of them, in which the figure, although shadowy, is fairly distinct, and the editor of *The Amateur Photographer*, recalling what occasionally occurred in wet-collodion times, when plates were frequently used over and over again, suggests the possibility of accounting for it in the same way. He says:

"The Lancashire newspapers contain reports of the unexpected or inexplicable appearance of a woman's figure in a photograph (the interior of a chapel) taken by a local photographer, who, it is stated, is 'inundated with orders for the photograph.' This kind of thing was much more common in the old days, the days of wet collodion, when the glass plates were generally used many times over, but even now a plate maker will occasionally purchase a lot of old negatives and boil off the films with a view to re-coating the glass. Under these circumstances it is not an extremely rare thing for an old image to plainly show again in the second negative, especially when the original or first negative was intensified with mercury. A trace of mercury compound appears to adhere pertinaciously to the glass, and to affect the new emulsion much as light affects it."

The weak point in this is the question, Do plate makers ever buy or get and clean off the films from old neg-

atives for re-coating purposes? I had always understood they did not, the time and material necessary for such a purpose costing more than new glass.

I did not in my last notice of the unusual appearance of the figure, nor do I in this, in any way insinuate that Mr. Street, the fortunate photographer to whom the figure came, had any art or part in its coming. All I meant to imply was, and is, that it is easy to "summon such spirits from the ———"; and may be made equally profitable.

* * *

I have always known that our friends across the water get most things cheaper than do we, but never supposed that "a whole-plate lens," presumably one of about 12-inch focus, could be got for \$5.00. But so it must be, for the *B. J.* says it in an article on "The Capabilities of Modern Lenses," in which it is shown that for some, indeed many, purposes the older form of lenses are in almost every respect as good as the more expensive anastigmats, speed excepted.

To put the matter in a nutshell, he, the writer, says, speed is the only point gained by using the modern lens. A good symmetrical or even cheap French lens R. R., costing, say, a sovereign for a whole-plate size, will give a picture with critical definition if it is stopped down to perhaps f/22 or f/32, while the anastigmat will give the same with full aperture, say, f/6, for all objects in the

one plan. I've put the last in italics because it is something to think about, but shall leave my readers to do the thinking.

* * *

In going through some of our exhibitions we sometimes come across a picture that makes us wonder why it is there or why it was sent, and in such cases have heard various reasons suggested, but never anything like the following, given to the *B. J.* by way of a reply to a rather unfavorable criticism: "If Mr. Clark had sat down before the picture and carefully thought it over, we feel sure that he would not have exhibited it." One reason for that opinion may be gathered from another of the critic's observations: "We have yet to learn that it is usual for young ladies in baronial mansions to undress in the hall and light themselves upstairs attired in their nightgowns." What probably made the matter worse was the fact that it was an enlargement, and while the photographer might have said nothing of the criticism so long as it was confined to the *quality* of the work, he evidently did not care to have his *taste* or knowledge of the proprieties impugned, and hence the following letter. The title of the picture was "To the Land of Nod."

"A REPLY TO CRITICISM.

"To the Editors.

"Gentlemen—With reference to your notice re the "Land of Nod," it is easy enough to act the critic without knowing particulars. May I point out, in self justification, that we unfortunate professional photographers have frequently to give in to the ideas of children's parents? The picture I do not in the least defend, but

I may add it is an order for ten 24 by 18 carbons at £5 each, on the understanding it is exhibited.

"Yours truly,

"JAMES CLARK."

* * *

It is well to be exact. In the November *Photography* J. H. Crabtree says: "It is just forty years since Prof. Piazzzi Smyth took a *flashlight* photograph in the spacious interior of the Great Pyramid of Gizeh." I have italicized "flashlight" because as a matter of fact the Professor used what he called "magnesium torches"—bundles of ribbon or wire of such lengths as were found necessary for the various parts and passages. True, Mr. Crabtree a little further on shows that by flashlight he means ribbon of various lengths, generally cut into pieces of about two inches each, but that is not what is generally understood by flash, and I don't want it to go on record that the most perfect series of photographs that were taken either before or since were the result of flashes.

In case this last statement should seem rather strong, let me give an idea of a perfection of technique hardly if at all understood by the present generation. The negatives were an inch square, on one end of the three-inch microscopic slide, and as the focusing was done before the Professor started from home he had no means of knowing what was in the view, finders not having been thought of. He went far enough away to be sure that it included what he wanted. In this way it oftener than not occurred that the object occupied only a small fraction of the inch negative and as often lay at all sorts of angles

on the plate. From this small fraction, generally less than a shirt button, the slide was made, and so perfect was the technique that the markings on the shells in the sands of the desert, magnified to almost the size of a stovepipe hat, were as beautifully distinct as if the shell had been on the microscopic stage under one of B. & L.'s best objectives. And the negatives of the interior were equally perfect, a perfection that could not have been reached by a flash, but only by several properly distributed torches of various sizes or lengths; the result being that even in the true darkness of the pyramid there were no shadows without their necessary detail.

I may add that those who would like to know more about the subject and have access to a file of *The British Journal of Photography* will find on page 268 of the 1866 volume drawings and description of the apparatus and how it was employed that should be interesting even now.

* * *

The lantern-slide season is again with us, and, as usual, the editors will be giving us their annual plea for their improvement. That the need for it is as great across the water as here will be evident from the following, which I clip from *Photography*. I wish that some one as much interested in slides as I but with a better filled purse would offer, say, a hundred dollars for the best set of six slides and send the prize set the round of the societies, as I believe the real cause of slide stagnation to be that slide makers do not know what to work up to, do not know a good slide when they see it.

"*Photography's* annual lantern-slide competition has come round once

more, and this year's entries are lying before us as we write. The competition, the seventeenth in the history of the paper, shows no falling off in the number of entries, quite the reverse. Each year has seen these increase, and in 1905 the increase is more marked than we ever remember it. But what can we say of the quality? There are some good slides to be seen amongst them, it is true, but how small a proportion they bear to the total number! We have been contradicted when we stated that slide making, if not a lost art, is at least not progressive at present, but almost every display of slides we see, and this competition is no exception, goes to prove our contention.

"The prevailing fault was excessive contrast, an aggressive harshness that was both false and displeasing. Some, it is true, had the opposite defect, but there were in a minority. The slides were judged by means of the mixed jet, and may have been made for less powerful illuminants; but over and over again during the judging the light was turned up or turned down, so as to get the best effect with each slide. The results are not exactly disappointing, because we were aware beforehand of their cause. But it is depressing all the same.

"How can this be remedied? Our belief is that individual societies can do much to foster and encourage an improvement in slide making. One club of which we know years ago realized that in this respect its members were not progressing as they were in the matter of prints. The subject was discussed, and regular monthly slide competitions were held, judging was done by the vote of the members present, and a strong effort

made to get the members to compete and to compete regularly. The policy was persisted in—indeed, it is pursued at the present day—and has been fully justified by the result. Not only did the members who entered profit, but those who merely looked on and voted on the merits of others' work were insensibly trained as to the points of a good slide, and this, if they were slide makers at all, influenced their work. In pictorial lantern-slide work photographers have a means of artistic expression which is entirely their own. As a slide by no possible means can be made to look like the outcome of some other art, a painting or an etching, for instance, there have been, and now are, those who have denied its pictorial possibilities altogether. We cannot too often or too strongly point out the baselessness of such an assertion; which to some extent at least has led directly to stagnation in slide making. If only the photographic societies would make the effort, on the lines suggested above, or on others which may commend themselves, we believe that a perfect reply could be made to those who deny the artistic capabilities of slide making, and that the process would show as much steady progression and improvement as can be noted in the case of prints."

* * *

The eighth Trail Taylor lecture. How time flies, and how faster as age increases! It does not seem very much more than eight since Brewster, Talbot, Davidson, Tunney, Marwick and others met in the back shop and led the then "poor Taylor" to give more attention to photography than to his watch mending; but which ultimately led to "poor Taylor" no

longer, but to his more legitimate field, to abandon the screwdriver and eyeglass for the paste and scissors of the editorial chair, and to write on photography and the optics therein involved, instead of repairing clocks and reporting court cases. But this was not what I intended to write about, but to notice an observation by Chapman Jones in his recent Trail lecture. The subject was "Photography, the Servant of Science," and after much valuable advice as to the production of the negative he added: "As to printing, the best advice I can give to the scientific worker is to avoid it. In a print the errors of the printing process are added to those of the negative." Curiously enough, this was the opinion of Professor Smyth, of whom I have just been writing, and I think I am safe in saying that he never made a print on paper or on anything but glass, or at least I never saw one in his possession, and I was intimately connected with him in all his photographic preparations and experiments, as well as with the outcome of their ultimate results. His favorite reproductions were enlargements on "whole-plate" glass from his small negatives, and if there are still any of the earlier members of the Edinburgh Photographic Society to the fore they cannot have forgotten the wonderful beauty of those transparencies.

* * *

We are indebted to the lay press for much information that, so far as the technical press is concerned, we should have to go without, the following being a good example:

"The *Daily Chronicle* tells us that M. H. Muller, a Swiss photographer, of Berne, while taking snapshots on

the Jungfrau, was overtaken by an avalanche, which carried his apparatus and himself some 250 yards without doing much harm to either. Later, on developing the plates, he discovered a fine photo of the avalanche and himself tumbling down the mountain-side. The avalanche had photographed itself."

This was a kind of "naturalistic" photography that beat Emerson's all to sticks.

* * *

Every now and again some one whose wish is father to the thought starts the idea of getting the State to prohibit any one from entering the photographic profession unless he has passed a certain examination, bringing in the doctor, parson and lawyer as examples, ignorant of the fact, and therefore ignoring it, that such examinations are intended to protect the lieges from evils that all or any of the three may inflict on them through their ignorance; and not, as they vainly imagine, to protect the present incumbents from the intrusion of others. The ignorant doctor may send

a man to his grave and the ignorant lawyer may so deprive him of his property as to make it hardly worth while to want to keep out of it, but even the poorest photographer pleases his patrons or he would not be patronized.

Such suggestions were never taken seriously except by their originators, and it has been left to the Virginians to "mean business" in connection with the movement; as, according to *The Photographer*, "The photographers of Virginia, in recent convention assembled, decided to appeal to their State Legislature to pass a law making it compulsory for a photographer to pass a State examination before being allowed to practice his profession in that State." State Legislatures do, or are *induced* to do, some queer things, but I doubt whether the photographers of Virginia are able or would be willing to create the inducement.

Suppose the law should pass and should be made retroactive, how many of the present-time professionals could pass? Galleries would, for a time at least, be cheap.

NOTES

COLOR SCREENS SUITED TO PLATES. —The editor of *Photography* has voiced what we have long felt and frequently said, that color filters should be fitted to the plates with which they are employed, although his suggestion as to how it might be accomplished by the plate makers does not to us seem so practical as it does to him.

The use of orthochromatic plates,

as our readers know, has long been one of the several points on which we have insisted in season and, some of our readers may have supposed, out of season, and while we know that the insistence has not been without effect, we know also that until we get screens or filters suitable for the plates with which they are to be used the full value of orthochromatism cannot be obtained. But it is easier to say

what we want than how we are to get it. That it must originate with the maker of the plate is a foregone conclusion; but just how he is to do it requires careful consideration. *Photography's* idea seems to be that he should issue, probably with each box of plates, a piece of stained gelatine, stained to the depth and color quality that will as far as possible balance the irregularities of the sensitive film; that is, to produce a combination that will reproduce the various objects according to their luminosities and not as the ordinary unscreened plate, according to their rates of vibration.

It would be easy for the maker to stain a gelatine or other film to the right depth and quality and cost little to put a few square inches into each box of plates; but such would neither be convenient in use nor last long in good order. *Photography's* idea seems to be that from this sample the photographer could select a suitable permanent screen, but it is well known that two colors visually alike may be very different in their spectrum, and that by nothing short of spectrum examination can colors be matched. Not every photographer has even a pocket spectroscope handy, or would care to go to the expense of one for that purpose, and therefore some other method must be found if ever the best is to be got from commercial orthochromatic plates.

While the squares of suitably colored gelatine might be of much use, we doubt whether the plate makers would care to add even that small additional cost to their production, although those who were liberal enough to do so would reap a sufficient reward. A more satisfactory way, we think, would be for each once for all

to find a formula for a suitable mixture of suitable dyes and print it along with the other formulæ to be found in each box of plates.

The formula would of course, be restricted to well-known commercial dyes, and while a lantern-slide plate from which the silver salt had been removed might be generally used, the formula might include a recommendation to so treat one of the plates in the box as likely to give greater uniformity.

While such formula would enable those who wished to make their own screens, they would not be dependent on their own work long, as many of those who are ever ready to commercialize every little thing likely to be of use would soon be advertising screens for every orthochromatic plate on the market, and at prices to suit all pockets. We say various prices advisedly, as while for certain kinds of work plates to be coated and stained must be optically correct, for all ordinary purposes ordinary lantern slides or even common commercial dry plates will be found good enough.

THE SECOND AMERICAN SALON.—So we have got to wait till after the 1st of May before we can see the second salon, and that although the whole series of judges have finished their work and from 1,800 sent by the local committees boiled down to some 175 prints, this not including the foreign contributions, which were still, at the time of judging, in the Custom House. Why the show is not to open in New York we do not at this time of writing know, but it would seem that it will open in Providence in December; and on to Pittsburg, Washington, Chicago, Minneapolis, Boston, Philadelphia,

and lastly New York. We suppose the difficulty of obtaining a suitable hall for the exhibition has something to do with the fact that it is proposed to hold it in the building in which the Metropolitan Club has its quarters, and which, in the opinion of some, is quite unsuitable.

WHITE SKIES.—Probably seventy-five per cent. of all the prints that come to Our Portfolio have white skies, and in spite of all that we can say and have written, they continue to come; some of those who send them even insisting that they are the result of over-exposure rather than over-development, or rather development pushed to extremity in the hope of bringing out something that from under-exposure had not been impressed and so not there to bring. The following from *The Amateur Pho-*

tographer should be helpful to some, although nothing short of abandoning the craze for snapping in season and out of season will get rid of the serious fault:

"Compared with the rest of the scene, a cloudless blue sky would be as grey, for you know that if in a landscape view there happens to be white linen hanging on a line to dry, these white things appear much whiter than the blue sky, yet in a white sky photograph both linen and blue sky are of the same tone. If the negative has thus falsely rendered the blue sky, it stands to reason it must have rendered everything else that is blue in a similarly false way, and blue and blue-grey enters into everything because all Nature is pervaded with an atmosphere which, when seen in a sufficient volume, appears blue-grey; hence the blue and grey of distance."

THE BACK OF THE NEGATIVE

By FREDERICK GRAVES.

IN our introduction to a series of articles on "Winter Work" in our last we recommended as the first step the improving of the negative, and mentioned particularly the working on the back as one of the most valuable operations. We therefore have pleasure in reproducing the following from *The Amateur Photographer* as an interesting addition to our recommendation:

"The amateur, as a rule, is well up in the process of after-treatment, intensification, and reduction, but few, I think, have much idea of the power that lies in their hands in the way of

control from the back of the plate.

"There are few negatives that may not be improved by working on the back. Papier-mincral, tissue, tracing, and other papers have long been used in this work, and these are manipulated by cutting and scraping, chalking and blacking, according to the requirements of the particular negative. To my mind, however, there is nothing to beat a gum varnish, such as

Gum sandarac	1 oz.
Gum dammar	1 oz.
Ether	10 oz.
Benzole	5 oz.

"The gum sandarac and dammar are

dissolved in the ether, and the solution is filtered or decanted from the residue, and then the benzole is added. The quantity of this latter will depend on the consistency of the varnish we want, for we may make it either thin or thick, and the result will vary accordingly in fineness or coarseness of the surface.

"This varnish dries very quickly, though the art of applying it to the plate requires a little practice; probably most workers know how this is done, for the directions are constantly appearing in print. A small pool is poured on the center of the plate, and this is allowed to run to each corner in turn until an even coating is given to the back of the negative we wish to work upon.

"But the coating of the back does nothing particular for us; it simply retards printing, and this is, of course, far more the case when the varnish is colored as with aurine.

"Then the scraping away of the varnish from those parts we wish to force will give us considerable advantage.

"Dragon's blood is another good coloring agent, and it is a good plan

to have varnishes of different depths of color.

"Now, upon this varnished back we may work. The stuff may be scraped away from those parts that are dense, and allowed to lie over the clear places, in order to strengthen them.

"Then we may work upon this varnished surface with powdered color, with black lead or any form of pigment, and so increase the retarding power. Clouds that will scarcely come up from the plain negative may be strengthened in this way wonderfully, and other faint objects so brought into prominence.

"On the other hand, not only in the case of the thin, under-exposed plate, but in that of the flat, over-exposed negative, this backing may be of service, and by adopting the reverse method of procedure, keeping the shadow clear, that is to say, leaving the varnish over the lights and scraping over the shadows.

"But to work successfully in this way requires practice, and the amateur must not be downhearted and disgusted if his first few experiments are not great successes."

P. O. P. PRINTS BY DEVELOPMENT

By DR. WOOLSEY BLACKLOCK.

NOTWITHSTANDING the extensive use of developing paper with all its advantages, we know that for various reasons many of our readers still cling to the "P. O. P." of their earlier experiences, and find that during the dull days as they come along that they cannot get quite as many prints as

they want. Developing a partly impressed image is far from new on such paper, but for various reasons it has never been much practised, although like most other new things it needs only a beginning.

The following, a paper read before the Gateshead Camera Club, should be helpful to such as have many prints

to make for some church bazaar or other Christmas meeting or greeting, twenty exposures for development being made in the time required for one to be printed out.

"Gelatino-chloride paper, commonly known as P. O. P., is probably used by more workers, and in greater quantity, than all the other photographic printing papers put together. The makers would be justified in adding another P. to the name, making it P. P. O. P., or popular printing-out paper. It is the easiest to use, and the easiest to fail with, and though its price is low, the average cost of each finished print is high. This is due partly to the use of gold in toning, but principally to the large percentage of prints that are wasted in the practice of the ordinary amateur. Over-printing, under-printing, over-toning, under-toning, double-toning, and high lights that are bright yellow, pink, or brown, instead of being white, are some of the many causes that lead to the filling of the waste-paper basket with spoiled prints, each of which has cost as much for time, trouble, and material as the most successful prize-winner of the lot. The process I am about to describe is free from most of these difficulties. The time of exposure is considerably reduced, and the question of over-exposure or under-exposure rendered unimportant; no gold is used, therefore the cost of that expensive metal is saved, and the numerous evils that accompany its use are thus avoided. The principal advantage of this process is that it enables the worker to produce a series of uniform prints with rapidity, certainty, and the minimum of waste.

"The saving in time is very great, one-sixtieth of the usual exposure be-

ing quite sufficient. This is shown by exposing strips of P. O. P. to light for gradually lengthening periods, and comparing the results before and after development. The experiment may be described thus: A piece of P. O. P. $4\frac{1}{4}$ in. by $3\frac{1}{4}$ in. is taken from the packet, and a strip $\frac{1}{2}$ in. wide at one end is covered with a piece of card, and the remainder exposed to daylight for 30 sec. Another $\frac{1}{2}$ in. is then covered, and the rest is again exposed for 30 sec. A third $\frac{1}{2}$ in. is covered, and another exposure of 1 min. given; then a fourth $\frac{1}{2}$ in. is covered, and the remainder exposed for 2 min. A fifth $\frac{1}{2}$ in. is covered, and an exposure of 4 min. given. Then, after covering the sixth $\frac{1}{2}$ in. an exposure of 8 min. is given, and lastly, the seventh $\frac{1}{2}$ in. is shielded and an exposure of 16 min. given to the eighth. The first $\frac{1}{2}$ in. has not been exposed to light, while the others have received exposures of 30 sec., 1 min., 2 min., 4 min., 8 min., 16 min., and 32 min. respectively. The sheet is then cut in halves lengthwise, and one-half developed and fixed. On comparing them it will be found that the second space on the developed half, which had been exposed for 30 sec., is as dark as the last strip on the other, which had been exposed for 32 min. This gives a proportion of 1 to 64, and shows the saving in time resulting from using the developer. This increase in sensitiveness involves scrupulous care not to expose the paper to light when placing it in or removing it from the printing frame, or when examining it to ascertain the depth to which it has been printed; any error in this respect will be shown by a corresponding darkening under the influence of the developer. Therefore it is better to develop by artificial light,

such as ordinary gaslight; a yellow screen is not necessary.

"The developer is made in two solutions:

A.

Pyrogalllic acid 32 grains
Tartaric acid 32 grains
Water 16 ounces
This solution will keep for three
or four weeks.

B.

Potass. bichromate... 1-16 grain
Water 16 ounces
This solution will keep for several
months.

"The easiest way of making it is to make a stock solution, 1 gr. to 1 oz., and add $\frac{1}{2}$ drachm of it to 16 oz. of water.

"Equal parts of A and B are mixed immediately before use, and will develop two or three prints in succession before becoming discolored.

"The prints are immersed dry, just as they come from the printing-frame, care being taken to see that the surface is uniformly wetted, and that there are no air-bubbles. Development begins in about a minute, and is allowed to continue until the print is

about as dark as the finished print is wished to be. It is then removed, washed quickly in water and placed in the fixing bath. No time must be wasted in doing this, as the print darkens with increasing rapidity. Fixing bath: Hypo, 1 ounce; acetate of lead, 60 grains; water, 6 ounces. The prints lose very little in this bath, and are of a fine sepia tint. The depth to which they should be printed in the frame may vary within wide limits. A faint image, showing only the deepest shadows, is sufficient, as the developer will bring out the rest of the picture. If the printing is carried farther there is less for the developer to do. It has appeared to me that the printed part of the picture does more in fixing than the developed part, therefore I prefer a faint print to start with. Bichromate of potassium was mentioned as an accelerator in 'The British Journal Photographic Almanac' about ten or fifteen years ago, but the solution recommended discolored very rapidly, and stained the prints. Acetic acid prevented this, but made the gelatine too soft. Tartaric acid was found to be more suitable."

THE "LITTLE GALLERIES" OF THE PHOTO SECESSION.

By ROLAND ROOD.

On November 25 there transpired in the amateur photographic world an event few as yet have heard of, an event still fewer understand, but an event of such paramount importance that its effects will in time be felt from one end of the country to the other. It was on this date that the Photo-Secession opened their "Little Gal-

leries" at New York. The following modest prospectus sent to a few lovers of the photographic art is the only announcement that heralded the event:

"The 'Little Galleries' of the Photo-Secession, 291 Fifth avenue, New York City, will be opened on November 25 with a members' exhibition, consisting of pictures shown at the

Lewis and Clark Exposition, at this year's London Salon, and of other work. Running through December, this exhibition will be followed by exhibitions devoted to Viennese, French, and British photographs, and by other exhibitions of modern art not necessarily photographic. These exhibitions will be open to the public on presentation of visiting card on weekdays, between 10 and 12 a. m., and 2 and 6 p. m."

The conception of the galleries is an extension of that of *Camera Work* and the Photo-Secession generally, "a protest against the conventional conception of pictorial photography;" and in these little rooms one can see an epitome of the life-work of Alfred Stieglitz and his collaborators. The immediate idea is to reach a larger public and present to them the very best that has been done in photography. But the Secession is esoteric if it is anything, and altogether apart from advertising to obtain this larger public, it seems almost to have made an effort to avoid it. Aside from the few prospectuses already referred to, and a small and almost unnoticeable sign on the street of 291 Fifth avenue, there has been, and will be, made no endeavor to attract. Those who love and understand and have the art-nose will find their way; those who do not recognize art when they see her, although they may come and look if they like, are not appealed to.

A further object of the "Little Galleries" is the bringing out of new talent, of hitherto unknown or ignored men; and not merely is it intended to give young talented photographers an opportunity to show what they can do, but painters and sculptors, as well as others, will have an opportunity, the

only requirement being that their art is art in the true sense of the word. The nature and arrangement of the exhibitions will be decided upon by the whole council of the Photo-Secession, neither one taking more part in its decisions than any other.

In its intention I know none like it in this country. It reminds me much of that of a certain Frenchman (I am sorry that I cannot remember his name this moment) who, recognizing what great difficulties, and, in cases, almost insurmountable obstacles, were put in the way of young painters by the wire-pulling and political methods of the Paris Salon, decided to give these young men all the help they required to make themselves known. With this object in view he engaged two or three small rooms in the Rue Druot in Paris—they were still there a few years ago—and in them it was that Monet and Manet, and others, made their debut.

There probably exists no country of importance in which such work is more necessary than in our land. We are, *par excellence*, a race of big and little shopkeepers; our ideal is the utilitarian, the commonplace our standard, and the conventional our goal. So I feel, and strongly, that any fight against this bourgeoisie is the fight of all fights to be fought; and those who lead it should be encouraged and helped in every possible way; they should be welcomed as champions come to the rescue. But such a fight as the "Little Galleries" propose is intensely difficult; for true art cannot advertise. It must stand aside and wait for the public to come to it; it must attract through its inherent excellence (an almost mathematical impossibility in America); it must wait

for those who understand it to speak for it; it must without protest suffer the vilifications and ridicule of the pseudo-artist, the pretender, and the *canaille*.

Now, in speaking for these "Little Galleries," I can do so with a clear conscience; for I am not a Secessionist. I am an entire outsider. It is their results and principles which I believe in.

But let me take you to the galleries and show you what they look like; you will then be able to judge for yourself. The first thing that strikes one is the elevator; it is unpretentious in the extreme—but effective—and takes us to the rooms at the top of the house. My sensations the first time that I entered them were confusing and not easily described. I knew I had come to see photographs, but the instant I was in their presence I forgot about photography. It did not seem photography at all, nor even (with very few exceptions) black and white. It was a series of sensations. I was in the fields and rambling through the brush; the sun was brightly shining and the wind gently blowing; I was transported into deep cool shadows and startled by Rembrandt-esque light; I saw the sun sinking in splashes of vermilion and gold. Then grey mists enveloped me; I was in the twilight, the lamplight, and the night. For a long time I wandered through the rooms, unconscious that there were others there. Suddenly a voice awakened me. "How do you like our illumination?" it asked. I had never noticed it; I had forgotten that it was evening, and that there must be some kind of light; I had never seen the series of beautiful electric lights that, by their quality and disposition, gave

such a natural illumination that you did not notice them. And then, for the first time, I saw the rooms. There are three, and they are small. I had not observed how small; my mind had been in the big spaces created by the pictures on the walls—and they are decorated in greys, in a few notes chosen with the very best taste, a few notes so arranged as to make you forget them unless you purposely look. I walked through the rooms again, and then realized that for the first time in my life I was in the presence of a series of photographs in which the photographic had been eliminated; for the first time I was beholding what the enthusiastic advocates of photography have always claimed for it, namely, a proof positive that photography could be made one of the means of personal expression. This, I must say, I had never doubted. I knew of individual examples which were complete works of art; but I had never seen, and I think very few others have, a whole collection (100) in which I felt that the medium and means to the end were no longer visible, in which the end, art, was an achieved fact.

Of course, there are some examples in which this has not been accomplished. The exhibition was open to every member of the Secession who chose to send, and, naturally, some fall slightly short; but what is so delightful is that you will never notice these unless you especially look. I had to in my capacity of critic. The only fault I have to find is that Alfred Stieglitz, or those who hung his frames, have so scattered his exhibit in various places that it does not quite produce the effect it might if it had a separate space to itself, as do the Whites, Kaesbiars, Steichens, and

many others. Certainly, no one can complain now that the "Dictator" is not willing to sink his personality in the cause of art.

Before closing there are a few words I wish to say about Steichen. For a long time I have withheld passing any judgment upon Steichen's work, for, although I have greatly admired it, yet I always felt that there was something unphotographic about it, and have again and again tried to find what it was, but have always been foiled; and, as I know that there are many others who are perplexed by the same doubts, I offer the following solution, which, however, I would stake heavily is the right one. It is exceedingly simple. Steichen is "unphotographic," you are quite right, *but he uses pure photography to accomplish these unphotographic results.* "What do you mean by this sophistry?" I hear you ask. It is not sophistry at all, but pure logic; it is your sophistry that prevents you seeing the truth. I will explain. When we see a chromolithograph we instantly recognize it by its material conditions, or what is vulgarly termed technique. We expect a chromo to look like a chromo, and should be very much surprised to find it looking like anything else; yet I once ran across a lot of chromolithographic reproductions after the paintings by Turner and for a long time thought they were water colors, and this merely because they had been produced with such thought and care as to eliminate the *appearance* of machine production; yet they were were chromos, machine made, and nothing else. An oil painting is produced with oil pigments; it is through the mechanical combination of canvas and oil pigments that

it is made, and in the majority of examples of oil paintings we can feel the pigment and canvas, and when we do so instantly call them amateurish. We only call an oil painting a picture when the materials have been handled in such a way as to make us forget them. And in this we are right, for ages of artists have taught us that true art can not be attained until we are made to forget the materials through which it has been brought into existence. And just so it is in photography. Only the art is so new, and we have such an exceedingly small number of photographs in which the lens and paper, etc., are not felt the moment we look at them, that we always expect to find them; and when we see such work as Steichen's, where none of the machinery is visible, we unconsciously conclude that it *cannot* be a photograph; that it *must* be something, anything else. But this is wrong, and it is not Steichen's photographs which are not photographs; *they* are photographs; *they* are drawn by light. But it is the ordinary everyday photographs which are not photographs, and should properly be called camera-graphs or machino-graphs.

And Steichen's works in this little show are certainly wonderful. I have never seen a more beautiful wall of black and white than he covers. I went back twice to see if they were, in truth, as they had appeared to me that first night. And they were! They haunt me to this day as a strange and lovely dream.

The Little Galleries are free to the public on presentation of visiting card, from 10 to 12 a. m. and 2 to 6 p. m. The present exhibition will be on view this month, followed by foreign work in January.

AWARDS IN THE SECOND AMERICAN SALON.

The Jury of Artists have made the following awards in the Second American Salon:

\$100 PURCHASE PRIZE OF THE AMERICAN FEDERATION FOR THE BEST PICTURE, SECOND AMERICAN SALON.

Mrs. G. A. Barton, Birmingham, Eng.,
"The Mother's Kiss."

1st Hon. Mention—Guido Rey, Turin,
Italy, "Scene Antique."

2d Hon. Mention—Alfred Ornano,
Genoa, Italy, "M. Maeterlinck La
Mort de Tintagiles, Act IV."

3d Hon. Mention—Wm. Clayden, Ply-
mouth, Eng., "Tugging Home."

Hon. Mention—Louis Fleckenstein,
Faribault, Minn., "The Lily Pond."

Hon. Mention—Frederick Haven
Pratt, Worcester, Mass., "Study of
a Face."

**\$50 AWARD BY "THE COUNTRY CAL-
ENDAR" FOR BEST LANDSCAPE
(AMERICAN WORK).**

Jas. E. Underhill, Brooklyn, N. Y.,
"Against Storm and Tide."

Hon. Mention—Frederick Haven
Pratt, Worcester Mass., "Landscape
—Northern Italy."

**\$50 AWARD BY THE LANDMARK PUB-
LISHING COMPANY FOR HISTORI-
CAL LANDMARK.**

Geo. T. Power, Chicago, Ill., "Niagara
Falls."

There were 346 pictures accepted,
by 123 exhibitors, 81 American, and
42 from England, Italy, Argentine
Republic, Cape Town, India, Holland.
Spain, Mexico, Ireland, Germany and
Austria, making quite an international
affair.

The following is the complete list
of exhibitors and the number of their
pictures accepted:

UNITED STATES		3 Sweet Brothers	
1 Barr, Chas. E.		2 Swenson, Gust. F.	
8 Bell, Curtis		2 Tracy, Margaret L. and	
4 Benedict, Dr. Albert R.		Edith H.	
3 Berger, Hy., Jr.		8 Townsend, C. E.	
5 Bingham, Katherine		3 Underhill, Jas. E.	
1 Bodine and Lewis		1 Walbridge, H. F.	
Misses		1 White, W. McG.	
2 Boger, W. A.		3 Wilhelmj, Dr. A.	
1 Bonfoey, A. D.		1 Willard, Mrs. Eleanor	
3 Brodhun, Will D.		4 Zerbe, Wm. H.	
2 Brookins, D. H.			
1 Brooks, Clarence G.		ENGLAND	
4 Brown, Miss Fedora	E.7	Barton, Mrs. G. A.	
D.		1 Bennett, Lionel C.	
3 Bruce, R. D.		1 Bennett, Hy. W.	
7 Burnett, Vivian		2 Blake, A. H.	
1 Buschemeyer, W. G.		5 Campion, Rev. H. C.	
1 Canuteson, John		3 Clayden, Wm.	
1 Chaffee, A. D.		1 Cheyne, Tulloch	
2 Chislett, John		2 Croft, J. Page	
1 Clarke, C. F.		2 Taylor, E. D.	
3 Cline, Winfield S.		6 Grindrod, Chas. F.	
1 Colman, Mrs. F. M.		5 Hensler, W. A. I.	
3 Corthell, Wendell G.		4 Hoppe, E. O.	
2 Dassenerville, W. E.		2 Kimber, S. G.	
2 Davis, Chas. W.		2 King, C. J.	
1 Davis, Dwight A.		1 Lane, W. Harold	
7 Eickemeyer, Rudolf, Jr.	5	Lee, G. Edgar	
2 Elmberger, G. C.		1 Lloyd, Lewis	
1 Engel, A. W.		2 Lodge, R. B.	
7 Field, J. H.		3 Marriage, Ernest	
1 Fischer, Fred		2 Mummary, I. C. S.	
8 Fleckenstein, Louis		2 Nitsdale, W. H.	
2 Furness, Dr. W. J.		7 Marian Silverston	
2 Gatch, Helen P.		7 Silverston, Marian	
4 Gates, Solon L.			
1 Gay, Geo. Howell		ITALY	
1 Gilbert, Homer W.		5 Becutti, Umberto	
4 Hanscom, Adelaide		2 Berta, E.	
1 Hasson, John D.		1 Cambiaso, M. M.	
5 Hendrickson, H.		1 Carlo, Scutio	
2 Holden, Samuel		7 Castruccio, Guiseppe	
3 Holm, Sara		2 Cavdini, Luigi	
5 Holmes, G. L.		4 Garrone, Edwardo	
1 Horlin, Gust.		9 Ornano, Alfredo	
2 Hutchinson, Eugene	R.9	Rey Guido	
2 Judson, O. B.		6 Gloeden, V. von	
1 Kaufman, R. S.			
1 Kennedy, Homer		GERMANY	
3 Knox, Wm. T.		3 Grienwaldt, L. O.	
3 Lamb, Louis Albert			
3 Martin, Samuel A.		ARGENTINE REPUBLIC	
1 Martindale, Thos. C.	2	Cardini, Eugenio A.	
2 Maurer, Oscar			
1 Meyer, Alfred J.		INDIA	
1 Minns, H. W.		1 Joshi, P. S.	
1 Morrison, Paul R.			
1 Oesting, Paul		HOLLAND	
7 Parrish, Misses W. and	3	Kaufmann, Martin, Jr.	
G.			
1 Pearce, Mrs. W. W.		CAPE TOWN	
2 Peterson, I. R.		3 Keene, Mrs. Caleb	
4 Phillips, Wm. H.			
1 Polasek, Edw.		AUSTRIA	
1 Potter, C. Fredk.		2 Ledenig, Adolph	
2 Power, Geo. T.			
5 Prall, Virginia M.		IRELAND	
2 Pratt, Fredk. Haven		1 McLean, Wm.	
1 Redfield, H. S.			
3 Robison, Wana		AUSTRIA	
3 Rodgers, Clarence M.		1 Mayer, Theodore	
1 Rosenberger, J. L.			
1 Scheer, Dr. G. H.		SPAIN	
2 Schuler, John W.		3 Poquet, Jose	
2 Shaw, Walden W.			
1 Skolfield, S. S.		MEXICO	
2 Sleeth, R. L., Jr.		2 Ravelle, H.	

ILLUSTRATION FROM THE
RUBAIYAT OF OMAR KHAYYAM

Second American Edition.

Adelaide Hanson

TINKERING WITH THE DEVELOPER.

By HENRY WENZEL, JR.

UNDER the above title, about two years ago, an English photographic weekly published first an article and then pros and cons from its various correspondents relative thereto, the contention of the editor-author of the article being that nothing was gained by modification of formula, variation of temperature, dilution, addition of restrainer, etc., his remarks being based on Hurter and Driffield's experiments and his own observation. The pith of the matter resolved itself into the time-worn advice, the more to be respected for its very age, that a modicum of the time spent in tinkering with the developer, thus to make the most out of improperly exposed plates, would have insured correct exposures and made possible the use of a normal developer, without need of tinkering—and better negatives as a result. It is a pity the whole matter could not be reproduced in one of our American publications; there was too much of it, however, even for the magazine originating the discussion, as it had to terminate it apparently long before its correspondents would have done so.

The use of bromide of potassium in pyro. developing solutions was discontinued by the writer some few years ago, and since that time there has been no occasion for its use. It was introduced to obtain a developing solution requiring a given factor for factorial development. After discarding factorial development the use of bromide was discontinued. Care in exposure will make it possible to not only discontinue the use of bro-

mide, but of tentative development, whether by use of a two-solution developer or by a dilute solution followed by a normal solution upon the appearance of the image in full detail.

It is already apparent that the writer does not believe in tinkering, but he does believe in, and has long been an advocate of, care in making exposures—such care as will keep records of every exposure and go over each and every one afterwards for the information it may contain. No such record should omit taking into consideration the subject dealt with. The mere matter of nearness or distance in one's subject is of the utmost importance, e. g., if a panoramic landscape required one second, a nearby landscape would require two; a portrait, the subject being still nearer, an even longer exposure; a copy of same size, longer still, the copy in this case being nearer than were the other subjects. The bellows extension and so the value of the diaphragm in use varies with the subject in such cases, and if we do not calculate our apertures at their new values we must give the values to the subjects. Other matters than mere distance of subject enter into exposure calculations, but I have touched upon a point given too little consideration if any at all, by others than users of exposure meters. But whoever would cease tinkering must think well when exposing of the allowance to be made for the nearness or distance of his subject—it is of the utmost importance.

It has not been the writer's aim to start a discussion, but to start many thinking whether or no it pays better to tinker or to think.

THE MUDDLE OF THE COPYRIGHT.

By A. C. SCOTT.

Varied comments have lately appeared in the newspapers regarding a case of interest to photographers and publishers, which came up in a New York police court.

"It appears that William G. Gray, a photographic printer, was arrested because he had sold photographs of 'The Sowers,' by Millet, which is the property of George Vanderbilt, but which is on exhibition at the Metropolitan Museum of Art. The magistrate discharged Gray, but he advised the complainant, who had Mr. Vanderbilt's permission to photograph the picture and sell copies, to test his rights in the civil courts.

"Merrill & Baker, publishers, engaged William A. Cooper, a photographer, to reproduce for them pictures in the galleries of George Vanderbilt and others. Photogravure copies of the best paintings in these collections were to be embodied in a work that was to sell at \$1,000 a copy, limited to fifteen copies. Cooper was to own the negatives, but agreed to make no copies from them unless at the request of Merrill & Baker.

"Cooper, when he caused Gray's arrest, alleged that he had engaged Gray to make carbon prints from the negatives, and that Gray knew of the agreement with Merrill & Baker, and himself agreed to make no prints other than those required by Cooper. It was specifically charged that Gray retained carbon prints and negatives of the Millet picture and sold them to Hegger, of Fifth avenue, and other art dealers and sent the negatives abroad. Cooper alleged that the value of the pictures said to have been disposed of was \$4,000.

"It is difficult to say what amounts to a publication of a work of art, and each case depends entirely upon the facts. The sale of a picture is not a publication of it. The publication of a wood engraving of a painting in a magazine, with an article describing the painting, is not a publication of the painting, for to constitute a publication there must be publication of the thing itself, and not a copy; so the publication of a cast is not the publication of the statue

from which the cast is taken."

The starting point here is the intention of a publishing firm, Merrill & Baker, to produce a work containing a series of photogravure copies of certain paintings, the property of George Vanderbilt and others, limited to fifteen copies and to cost \$1,000 each, the presumption being that the owners of the paintings were also the owners of the copyright thereof.

The first step of the progress seems to have been that the publishers, not being photographers, employed a W. A. Cooper to make the negatives in the private or public galleries where they were, and their right to do so is evidently undisputed. Here, however, the publishers made an incomprehensible mistake; the negatives were to be the property of Cooper, although he was to print from them only at the order of his employers, the publishers. Now, it seems that Cooper was not himself a printer, and employed a W. G. Gray to make the prints; and here begins the mystery. Cooper was employed to make negatives for the production of the photogravures for the \$1,000 book, and was only to print from them on the order of his employers; yet he employs Gray to make carbon prints from them. It is just possible that there is something not recorded in the extract here reproduced that might throw light on the carbon question, but there was evidently no excuse for Gray, as is alleged, retaining negatives and making and selling carbon copies from them, as seems to have been proved, and yet he was discharged, the magistrate saying that it was a serious question whether Cooper or Vanderbilt were injured.

A more serious question, in my opinion, is the injury done to the publishers. And very little thinking is needed to show that a book, the edition of which was limited to fifteen copies, and the value of which was \$1,000 per copy, was dependent on its illustrations, would be very much handicapped by a sale of carbon copies of those illustrations for, practically speaking, an old song.

Just why Gray should have been discharged I cannot understand, and equally incomprehensible is why there should have been carbon printing mixed up with it; and

worst of all is the arrangement by which the negatives should have been the property of the photographer, instead of his employer.

The Camera Club of New York.

The regular monthly meeting of The Camera Club was held at the club rooms, No. 5 West Thirty-first street, on Tuesday evening, November 14, 1905, President F. Benedict Herzog, Ph.D., presiding.

The usual routine business was transacted and announcement made of action taken by the Board of Trustees at a special meeting held immediately before the club meeting. This included the election of several new members, the appointment of a Committee on Lantern Slides, and the appointment of Mr. Frederick C. Beach as Director to represent the club in the American Lantern Slide Interchange.

Mr. Beach then kindly demonstrated to the members present the working of a simple apparatus for the rapid duplication of drawings and of printing from flexible negatives.

The apparatus is designed to produce duplicates of drawings principally, which will

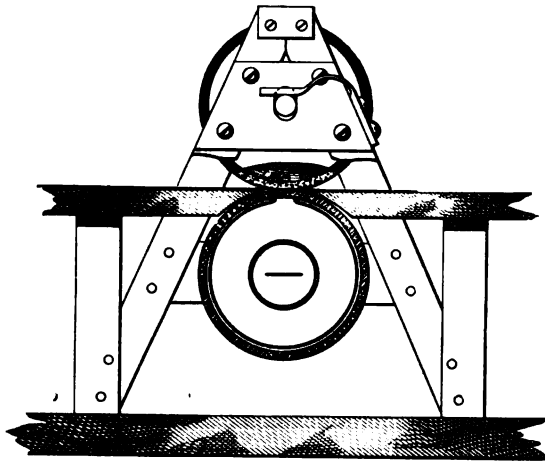
be reversed as to color but positive as to letters, figures, writings, etc., without the use of a printing frame and with greater facility. It is also adapted to make positive prints from film or flexible negatives.

As will be noticed in the accompanying illustration, the machine consists mainly of two rollers about three inches in diameter, similar to the rolls in an ordinary clothes wringer, mounted one above the other; the upper one is solid, covered with soft felt-ing material, and runs in slotted bearings at each end, having pressure springs above to exert pressure on the lower roll. This latter is more complicated, but runs in solid bearings. It consists of a glass cylinder about one-eighth of an inch thick, having a metal plug in one end with suitable ventilation openings, and a shaft to fit in a bearing in the supporting frame. The other end of the glass roll is open and is held in position by outside roller bearings, supported in the frame. On the interior of

the transparent roll is a shade held stationary, extending the full length of the roll, which has a slot in its upper part directly under the contact point of the two rolls. Supported upon another removable frame is an incandescent candle-shaped electric light bulb made long enough to equally illuminate the slot in the shade within the glass cylinder, or, in other words, to illuminate only the section of the drawing or film at the actual point of contact of the two rolls. The electric lamp is inserted at the open end of the glass roll. Gears at one end of the rolls cause the latter to rotate with equal speed. In front and behind the rolls are platforms arranged for feeding in the drawing as the rolls are rotated. It is highly essential in this machine that the

ness of drawing or negative to be run through. The diagram shows plainly the principle of the apparatus.

In operation the sheet of drawing is laid upon the platform, then over it is laid a sheet of slow bromide paper with the sensitive side upward, the motor is started, and the drawing and sensitive sheet are pushed or fed to the two rolls. The time of exposure, or of the passage of the drawing through, is about ten seconds. The exposed sheet is then developed and duplicates are obtained by simply repeating the operation, all in a dark room. The time of exposure can be varied by inserting resistance in the motor circuit to make the motor rotate faster or slower if the drawing is thin or thicker.



Detail of Construction of Photographic Printing Apparatus.

rolls shall revolve with a continuous, steady, music-box-like motion, in order that the light may act equally upon the whole sensitive surface. An uneven movement will show in the form of lines across the print. It was found that a small electric motor produced the right effect, although the machine could be operated as well by a spring or weight suitably geared up. It will be observed the shaft of the small motor (similar to an electric fan motor) attached to one side of the platform has a spiral worm screw on its end which engages a gear wheel; from this gear the speed of rotation is still reduced by other interchangeable intermediate gears, until the right degree of movement is ascertained for a given thick-

In the case of film negatives, the intensity of the light may be reduced by interposing between the lower glass light roll and the negative one or two sheets of translucent celluloid. When the right thickness has been determined by experiment, duplicate prints may be made with certainty. Mr. Beach operated the machine from an ordinary electric light bulb socket before the members and exhibited duplicate prints of a drawing and film negative which he had made shortly before the meeting. He explained that it was possible to photograph through letters or documents of any kind in this way and secure fac-simile copies showing the various water-marks and other markings in the paper of the original as

well. By exposing through the back of the sensitive sheet the print shows the writing as white, reading the right way, while the ground is black, or the reverse in color of the original.

A vote of thanks was extended to Mr. Beach and the meeting adjourned.

E. LEE FERGUSON, Secretary.

Toronto Camera Club.

In the seventeenth annual statement issued by the club recently, signed by J. Maughan, Jr., president, information is given of the coming removal of the club to more commodious and fitting quarters in the Bank of Hamilton building, corner of Yonge and Gould streets, in Toronto. A lease of ten years has been taken, which is evidence that the members expect the prosperity of the club will continue. The president urges members to secure new accessions, in the hope that the limit of one hundred and seventy-five members may be obtained. He states that the salon and several exhibitions held by the club have been of the highest and best order, showing increased interest from outside exhibitors.

The secretary-treasurer's statement for the year ending September 30th is a clear exposition of the affairs of the club, prepared by Mr. Hugh Neilson, the popular secretary. A surplus over the previous year is shown and no liabilities. The surplus of \$1,142.06 is made up of furniture valued at \$724.06; cash, \$417.41.

American Lantern Slide Interchange.

The annual meeting of the board of managers of the Interchange for the testing of slides was held at 361 Broadway, this city, on the evening of December 7th. The sad news of the sudden death on December 5th of Mr. William H. Cheney of the Orange Camera club and for many years a continuous member on the board, was deeply felt by the remaining members.

The several clubs had voted in the old board for another year, but the death of Mr. Cheney and the resignation of Mr. Henry S. Redfield of Hartford, Conn., left

two vacancies to be filled. The Orange club had appointed Mr. H. R. Terhune to succeed Mr. Cheney. The board then, by a unanimous vote, appointed Mr. H. R. Terhune and Mrs. O. C. Reiter of Pittsburgh, Pa., representing the photographic section of the Pittsburgh Academy of Science, to fill the vacancies and thus completed it. It was voted that the general manager send a communication of condolence to the widow of Mr. Cheney.

The testing of slides began about 5 o'clock p. m. and lasted until shortly after midnight with an hour's intermission. There were in all about 1,440 slides sent in by sixteen clubs. Each of these slides was separately examined on the screen and voted upon by the five members present, a majority vote deciding for acceptance or rejection. In addition, special marks were made on the rejected slides of a few clubs for the purpose of showing the makers why the slides were not approved. The following letters of the alphabet were used as a key:

A—Meaning flat, weak.

B—Meaning hard, too strong contrasts, chalky whites.

C—Meaning out of focus.

D—Meaning badly and improperly matted; incorrectly labeled.

E—Meaning uninteresting subject.

F—Meaning bad composition or image too large on the plate.

The net result of the test was that over nine hundred slides were approved or an average of sixty per cent. Two clubs, the Camera Club of New York and the California Club of San Francisco, will contribute sets later. The club holding the highest percentage was the Buffalo Camera Club, having 116 slides approved out of 125. The Orange Club came next with 111 out of 125.

The clubs forming the Interchange for the season of 1906 are Hamilton (Canada) Camera Club, Bethlehem (Pa.) Photographic Society, Trenton (N. J.) Photographic Society, Orange Camera Club, Buffalo Camera Club, Denver (Col.) Photographic Society, Brockton (Mass.) Camera Club, Pittsburgh Photographic Society, Columbia (Phila.) Photographic Society,

Chicago Camera Club, Photographic Society of Philadelphia, Bisbee (Arizona) Camera Club, New Britain (Conn.) Camera Club, Syracuse Camera Club, Newark (N. J.) Camera Club, Photographic Club of Baltimore (Md.). From the collection of approved slides sets of one hundred or more slides each are prepared and boxed, then they are circulated among clubs for exhibition purposes, about once or twice a month. The sets make a very good foundation to go in with sets prepared by members for the entertainment of friends.

Information may be obtained by addressing F. C. Beach, 361 Broadway, N. Y., the general manager

The American Federation Lantern Slide \$100 Prize Competition.

This test began on the evening of December 8 at the Metropolitan Camera Club's rooms in West 101st street near Columbus avenue, this city. Mr. Henry S. Redfield of Hartford, Conn., chairman of the committee on federation slides, presided, and at the meeting some modifications of the rules were agreed upon about admitting new clubs to membership and the regulations of new sets to be exhibited.

Some time after midnight the test was adjourned to Saturday evening, December 9.

2046. G. L. RENZ.—"The Approach of a Storm" never produced anything like the blackness in which you have represented everything here. A bit of nearly white sky, a few white lines outlining certain parts of the roofs, and all the rest in the blackness of midnight is simply a waste of material, representing nothing but a fearfully under-exposed negative and an equally over-developed print. Had everything been as dark as you have represented it you could not have seen where to point the camera.

2047. C. M. CURTZ.—"In Ogden Canyon" is an example of as nearly as possible perfect technique and a fine topographical rendering of a beautiful specimen of nature's handwork. This differs from our usual idea of a canyon in as far as it is covered with foliage down to the water's edge with only small indications of rock here and there, and all, including the distant mountain and its atmosphere, beautifully rendered. It is altogether a fine piece of work, and particularly suited for enlarging; and, enlarged to four diameters, it would make a splendid decoration for any wall.

2048. A. R. BARKER.—"Oak Trees." The placing and arrangement are good, but being bare branches and utterly false in values few would believe that they were oaks, thinking you had mistaken them for birches. Oaks were never so white on the lighted or so black on the side in shade, the cause being considerable under-exposure and over-development. Carefully study a recent article on this subject and you will do better in future. We may say, however, that the picture would have been better if a little higher foreground, an inch taken from the sky and added to it would have made a considerable difference. There was no need to include any of the treetops. Like probably 90 per cent. of all camera carriers you have yet to learn that proper, at least sufficient exposure, is essential to all good photography.

2049. LOUIS BRIGUARDELLO.—"The Old Wooden Bridge" is a fine subject from a fairly good point of view, and would have been an equally fine picture had the negative been sufficiently exposed. That it has not got such should be evident to you as well as to us, as you must know that you never saw a bank of grass, a wooden bridge

No. 2040

Louis Briguardello

or a sky as white as they are represented here. Read carefully the appendix to a letter in our last number on the question of exposure, and you will then know why this is simply worthless, and how easily you could have made it into a fine photograph. Three times the exposure and probably a third the time of development would have made all the difference.

2050. J. KAMASAWA.—"Onuma Hokkaido Lake, Japan," is a composition of the simplest kind, a triangular foreground, a prominent tree, with one less prominent in the middle distance, and with little more than the suggestion of the lake and its surroundings as if enveloped in a misty haze. It is, however, effective, and in every way both a good picture and a fine photograph—all the more effective coming, as it does, a print from a properly exposed negative amongst so many that are worthless from under-exposure.

2051. G. S. SMALLWOOD.—"Brook in the Woods" is another of those photographs that are a puzzle as to what could have tempted its author to waste a plate on it. A thoroughly out-of-focus foreground, a little water in the middle distance covered with a mass of branches, and a fallen tree on the latter of which sit three figures in a place where they were not wanted, but small enough to be overlooked, and in the distance an equally confused mass of foliage, the only plane on the print in good focus, and at the same time the only plane that should not have been so. Did it not occur to you that it is ludicrous to have the extreme distance, the plane of hazy atmosphere, as sharp as the lens at $f/32$

can make it while the nearer and nearest planes were in confusion? If you could have cleared away the mass of branches from the water, put them out of the picture altogether, used $f/16$, say, and focused for the foreground so as to secure the necessary atmosphere in the distance you might have had a passable picture, while as it is it is just a confused jumble of meaningless matter. Any part of the brook must have been better than this, as none could have possibly been worse. The reproduction shows how it may be improved by trimming and local reduction.

2052. FARMAN HANNA.—"Approaching Storm" is a good piece of work both as regards foreground and sky, but only when regarded differently and without connection with the title. The dark foreground with its lonely ass, certainly appears just as it should under a portentous sky; but, alas! that sky is not here. Instead, it is fairly well lit, quite unlike what should have given such somberness to the landscape. It is a good foreground and a good sky, but they are not well matched; the one should have been darker or the other lighter—changes that could have been easily made in the printing.

2053. L. B. WINN.—"The First Freeze" has nothing to suggest the title, although the bare branches tell of the time when frost may come. The subject is not picturesque and the photography has not improved it, there being a lack of contrast or any object of more importance than another, and hardly a shade beyond perfect black and grey, blacker than is anything in nature, and what should be either water or ice is like neither. We suppose the reflection was what tempted you to select this subject; but reflections, however well they look in nature, never make a picture unless they are destroyed just before exposure by the throwing in of a stone or in some other way. The "first frost," while it finds the branches bare, finds the ground carpeted by the leaves, making it lighter instead of, as you have it here, very much darker than even covered with grass, which, taken along with the blackness of the trees, tells of much under-exposure, the besetting sin of 90 per cent. of all the camera carriers of the present time.

2054. H. O. BARNES.—"Nothing Doing." We do not see the application of the title, but think it might justly have been "nothing done right." The subject, we can guess, was a sheet of water across which lay the trunk of a tree. Beyond a strip of ground with a number of various-sized trees and brush, and above those the sky. That it was water and sky, however, we can only guess, the former from the reflections and the latter from its position, both being simply white paper except for the said reflections. Surely you must see as well as we that neither are properly so represented, and therefore just why you should send it for criticism is a puzzle. The subject, even if well photographed, would not be very attractive; but if you get the chance again lower the horizon line a little—the middle

No. 2054

H. O. Barnes

is always a weak point—disturb the water so as to destroy the reflections, making them shadows instead, and expose long enough to get, in development, all necessary detail in the shadows before water and sky are in the negative opaque, so as to leave in the print nothing but unaltered paper.

2055. CARL KREBS.—"An Encounter," a lady meeting a little snake in what may be a path in the wood is not very impressive, as somehow we cannot feel that such a tiny thing could be worth more than a passing thought, unless perhaps a blow with the parasol. Had it been a rattler coiled ready to strike, the thing would have been different and sufficient to set the nerves on edge. But it is a good photograph of a good idea, the only fault being the size of the snake; and while we should have liked

No. 2055

Carl Krebs

to have seen the greater effect, we are glad on the lady's account that we are so far disappointed. You have made the best of it, although the model regards the snake more as a curiosity than as something to be afraid of. This brings back to us the long, long ago. The first snake we ever saw was with just such a lady on our arm and in just such a wood, but instead of standing aside she applied her parasol and killed it. She was born and reared in a land of snakes; I had just come from a land where they are unknown.

2056. G. O. LOVELL.—"Landscape" is rather a misnomer, as the picture, and it is a picture, includes only a single tree, or rather only a portion of one, tops and branches reaching far out of the space. As a reproduction of a tree, or a botanical specimen, we can imagine nothing better or of more perfect technique; and, rare thing nowadays, the exposure has been perfect. We often say that we see in a picture just what we bring to it, but we can hardly think any one can study this without feeling its poetry and influence. Its rugged grandeur, maintaining its upright position although climbing from a steep hillside, its grip of the ground as the foundation of its spreading power—all make it a teacher and emblem of stability.

RUINS OF QUINDARO IN A NOVEMBER FOG

Dr. Geo. A. Graham

First Award in Monthly Competition

OUR MONTHLY COMPETITION.

Entries seem to decrease in quality as the numbers increase. Much of the work received marked "For Competition" should be sent to "Our Portfolio." In holding forth the monthly award it is for the purpose of inducing our more advanced readers to send their *best work* for reproduction. Prints will be returned if requested. The award this month is divided as follows: 1st, Dr. Geo. A. Graham, Kansas City, who submitted a very poetic rendering of the "Ruins of Quindaro in a November Fog;" 2d, M. S. White, Grand Rapids, "Mother's Joy," a photograph of technical merit; and 3d, J. W. Walker, Montreal, "In the Gloaming," a very artistic landscape.

A New Developer.

RUDOL, the new developer mentioned in our last as having been introduced by Dr L. C. Marquart, of Beuel on the Rhine, and having as its sole sales agent for America G. A. Crayen, of 71 Barclay street, New York, has now been submitted to the test of practical work, with the result that we are able to say that it leaves nothing to be desired.

While we have always insisted that the true photographer should know the nature and properties of the various constituents of his developer, and the part played by

each in the production of the image, a knowledge that can be obtained only by those who make up their own solutions, we know that probably 75 per cent of all camera carriers, when they develop at all, do so with commercial preparations. Nor are they confined to beginners or those whose time is limited, as many of the best pictures on our salon walls are from negatives so developed.

Rudol is a colorless solution, the No. 1 of "separate solution" developers, and requiring the addition of the alkali to make it complete. The maker's instructions are to

BUILDINGS OF THE ILLINOIS COLLEGE OF PHOTOGRAPHY.

We have already had appreciative notices of the engraving department of the Illinois College of Photography and shown a block, the work of one of its students. We are now, through the favor of Mr. L. H. Bissell, the President, able to show another, also the work of a student from beginning to end, and it speaks for itself. If photographers could only realize the value to them of the ability to make such blocks, the short time the learning occupies and the small fee, the central building, large as it is, would not be large enough to hold the applicants for tuition. But the value of the half-tone block to the professional is too large a subject for this short note, and so we shall return to it again, as we know from experience that they are conservative, slow to change or take to anything new; but, we know also that as soon as they realize the value of this and how easy it is when properly taught, they will not be slow to take it up.

add to one part of rudol four parts of water and one part of a 10 per cent. solution of potassium carbonate; practically one to five, with eight grains per ounce of the alkali. We, however, prefer the sodium salt, and find it acts equally well with twelve grains of the sodium carbonate.

It belongs to the class of slow developers, its developing factor being about 15, more or less, according to the kind of negative desired. It is a clean working, non-staining developer, with no tendency to fog during even protracted development. While, of course, it will keep indefinitely without the alkali its keeping quality in the alkaline state is very good, and those who like to do so may use it over and over again, and will find it equally good for negatives, prints on paper, and lantern slides. Its maker claims for it what a friend calls persuasive and discriminating power, the ability to bring out all that there is even in the shortest exposures, and at the same time to more or less control over-exposure; and, while we know that no developer can develop an image that has not been impressed, we may say that rudol will be found as persuasive as the most.

WITH THE CAMERA, the monthly circular from the Illinois College of Photography, tells as usual of constant progression, of visits from former students, of marrying and giving in marriage, etc., etc., etc. One of the most satisfactory features of the reports is the fact that students never seem to have difficulty in finding positions, and also that they are rarely long in being able to open studios of their own where they always do well. We gather also that three-color work is being pushed and that already a number of pupils are at work on that interesting phase of photography, and that the engraving department is a great success. Even Japan has heard of it, and within a short time a pupil who is about to graduate will show the Japanese what we can do here in that line.

But in the college it is not all work and no play, as the lovers of old lore found on Hallowe'en, when, according to the circular, "destinies were read, in every conceivable rite, and skeletons, mephistos, darkness, electricity, and, indeed, everything else was employed to produce the maximum of scare and squeal, the whole concluding with a dance."

About Exposure, Etc.

Dear Sirs—I endeavor to follow your suggestions as to the proper exposure, but being perhaps an amateur whose stupidity is beyond the average, I frequently over-expose.

I find in most of the landscape views I attempt that there are both very strong lights and very heavy shadows; and in exposing, or trying to do so, for the dense shadows, my high lights are greatly over-exposed and the resulting negative lacking in contrast and disappointing.

I suppose that expert developing may, to a certain extent, remedy my difficulties;

but I am not expert enough to know how to go about this.

I am under the impression that I have seen a statement made by some photographic adviser to the effect that certain objects or views cannot be successfully photographed on one plate. That is to say, a foaming stream, surrounded by dark green foliage, requires two exposures; but if the exposure may be corrected in development, why should these two exposures be necessary?

Thus inquiry may be childish to one of your experience and probably lacks interest to the general reader; but I have so little time to give to photography that I have to seek advice from those who know.

MOTHER'S JOY

Second in Monthly Competition

M. S. White

Please accept my apology for bothering a busy man and my thanks for such information as your time will permit.

Respectfully yours,

C. A. W.

[There are no questions regarding photography with which we have so frequently had to deal as those raised in your letter; and none apparently that continue so little understood. You may take it for granted that your negatives of ordinary landscapes with "very heavy shadows and very strong lights" are under-exposed and over-developed for reasons that were dealt with at length in our last issue; but we are not so sure of the cause of the "lacking of contrast," which you attribute to over-exposure. With no better evidence than you give, without seeing the negative in fact, we should rather say that the flatness arose from under-development; as, under ordinary conditions at least, contrast is simply dependent on the continuation of that operation. This means that unless your over-exposure was very much more than you would have been likely to give, sufficient contrast would have been reached by continuing development.

While for the development of films that had received over-exposure to the extent of twenty, forty or eighty times the normal, expert modification of the developer may be necessary, no such modification is required for those that have been only

sufficient for the deepest shadows of an ordinary landscape; as the normal developer, which may be taken as that recommended by the maker of the plate, if allowed to act long enough, but not too long, will always give all the degrees of gradation in the subject possible to the plate.

You will notice that we have referred in all this to "ordinary" landscape, to which, of course, there are exceptions such as you suggest, "a foaming stream or frothy waterfall surrounded with dark foliage," which may require exceptional treatment. For such exceptions either of two methods may be adopted, but neither of them by modifications of the developer or development. One, by which we may say that we have never succeeded well and so do not like, although we have seen excellent work done by it by Professor Burnham, of Chicago, is to expose for the dark foliage and stop development only when it was satisfactory; and then reduce the vastly over-developed sky, water, or waterfall by the local application of "Farmer's solution," a ten per cent. solution of hypo. colored to a straw by potassium ferricyanide, and applied on a tuft of cotton. The other, with which we have always succeeded and therefore prefer, is to make two exposures, one for the waterfall and one for the dark surroundings, and by double printing make a print that never showed the method of its production.—Eds.]

What's in a Name?

R. W. S.—Don't, if you have any sense left, adopt anything so foolish. It may have been forgivable in Sarony and one or two others who had proved themselves head and shoulders above their fellows, to sign only their last name as Bishops and some crowned heads do, but lesser men, men of only average ability, even if in their

own mind they think they are entitled to something more than average consideration, only get laughed at when they make such fools of themselves in that way. Equally absurd and quite as effective in turning away customers is the fashion of describing yourself as "Photo-Artist" or "Art Photographer," or, indeed, in any other way than plain "John Smith, Photographer." Your

artistic abilities will be shown by your work; and a title given by your customers is of vastly more value than one chosen by yourself. Make better work, more attractive work than your competitors, and, although it may be uphill work, you may be sure of ultimate success. But by "better work" you must understand that it is not necessarily the kind of work that would be received with favor at the salons, but the kind of work that your customers want. Don't make the mistake of trying to force on them what they do not understand, but find out what they want and do your best to give it to them. That is the great secret of success in any locality.

Words of Cheer.

HARRY SANDILAND.—Thanks, but if you would tell all your photographing friends just what you have told us you would very much please our publishers, and probably benefit yourself, as the larger the circulation the more we should be able to give you in the magazine. Thanks also for the article, which we shall use.

Flare Spot.

G. L. RENZ.—Ghost or flare, something like what is on your print, is generally caused by the formation of an image of the stop, and is generally obviated by a slight change in its position, a little in either direction. The appearance of the ghost or flare, however, is generally more regular than the fault in your print, and as it appears only when working against the sun in your attempt to produce the so-called moonlight effects, we believe it will be found to proceed from some insufficiently blackened part of the stop or the inside of the lens mount.

Old Negative Glass.

G. H. RONALDSON.—Why not apply to some of the plate makers instead of to us? The fact that the journal you mention said so makes it likely that some of the English plate makers buy old negatives, but that does not alter our opinion, which was, and in fact is, that no American makers do so; they finding it cheaper to use new glass than pay for the time and material employed in cleaning the old. Application to the American plate makers will, we think, prove that our answer was correct, that they will not buy your old negatives; and if it should

turn out that we were mistaken we shall be glad to know it. Notwithstanding your rather cynical concluding sentence, we *are* glad to confess—or we should rather put it, proud to proclaim—that we are wiser today than we were yesterday. All this, however, does not alter that fact, or what we believe to be so, that American plate makers do not buy old negatives for the purpose of cleaning off and making new plates.

Titling the Negatives.

A. L. BRUCE.—"Nameit" is a set of rubber type, each letter of which is reversed so that when printed on the film of the negative it will read correctly on the print. It has long been used in Britain, but we have not heard of its being on this side. It is made by Richford & Co., Snow Hill, London, E. C. G. Gennert, 26 East Thirtieth street, New York, can supply you with reversed rubber type, known as "Photo-script."

F. CHAPIN.—The strength of the solution of potassium iodide for writing the titles of pictures on the films of the negatives so that they will print black, is immaterial. You may make it ten grains to the ounce of water, adding a little gum to prevent it running. Solution of hypo applied over the writing will make it more transparent. You may write on the glass side with any opaque ink, but does it not occur to you that such writing would be too blurred for practical use? See answer to A. L. Bruce.

Slide Making.

HELLEN BURTON.—The formula is not of so much importance as it is to stick to one and make the exposures to suit it, and unless you have a favorite you had better employ that recommended by the maker of the plates. Never forget that a trace of fog on a lantern slide is less of an evil than the hardness so universal, especially on commercial productions. In lantern slides everything depends on exposure, the nearer the correct the better the slide, and under no conditions should the developer be modified or manipulated. It is not long since one of England's best slide makers, at a meeting of the camera club, said that if he got one perfect slide from each dozen of plates he was perfectly satisfied.

Keeping Qualities of Film.

FLAT FILMS.—Not at all. The limitation is merely intended by the makers to protect themselves against claims for bad films, made bad by careless keeping or other causes. We have before us now a perfect negative, that is perfect so far as the film is concerned, made a few days since on a film bearing the notice, "This film must be developed before March 1, 1904"—more than a year and eight months beyond the limit. It was a 5x7 roll of twelve exposures, and we still have a few of them left which we confidently believe will give us good negatives at least another eight months hence.

A Question of Focus.

E. N. QUIRER.—You do not inquire as much as assert, but you are wrong. If a constant reader, you are not so careful as you might be, else you would have seen your question, or rather assertion, answered in our last. When you copied the card to full size, the lens was not working at a focal length of 12. but of 24 inches, and the stop $f/8$ in ordinary work became $f/16$. Don't send the cigars; we are sensible enough to prefer and use a pipe.

The Metrical System.

J. S. McDUGAL.—There are advantages in both systems, and neither is perfect, but you should have no trouble in reading formulas in the metrical system. There are few that include other than grams and cubic centimetres, and you will be near enough for all practical purposes by taking them as alike—the one being for solids, the other for liquids; and take both as parts—grains, drachms, ounces, etc., weighing the solids and measuring the liquids, considering the minim equal to the grain.

Size of Lantern Screen.

LANTERNIST.—To fill the ten-foot screen with the lantern in the front of the gallery at a distance of fifty feet you will require a lens of 14 inches focus. With a three-inch slide that will give a circle of a little over ten feet, but it will be not too large for the squared picture. Your friend had the "little knowledge which is the dangerous thing," as he was right in the diminution being equal to the spreading out of the light, but he did not realize that with the longer focus the light is not spread as he

supposes; the fact being that, with the same source of light and the same size of disc, the illumination will be the same, a 14-inch lens at 50 feet spreading the base of its cone to just the same diameter as a four-inch lens at 13 feet.

Wood Alcohol.

A. L. JACKSON.—Your druggist has something to learn, although we could hardly have believed there was one in America who did not know ethyl from methyl alcohol, or who would, when you asked for the latter, have given you the former, assuring you that what you asked for was something sold in Europe as methylated spirit. If you had asked for "wood alcohol" he would have known what you wanted.

Magic Photographs.

MARTHA GIBSON.—Your failure with the so-called magic photographs is easily understood. You toned the prints with gold, and gold is not changed by the mercurial salt as easily as the silver. Try again, fixing with hypo *without toning*, and you will find the image soon disappear under the action of the mercuric salt.

A Question of Copyright.

R. S. BAILIE.—We cannot say whether the album of the surroundings of the sanitarium can be copyrighted as a book or whether each separate photograph should be registered. Apply to a patent agent, who will know all about it.

"Sartor Resartus."

A. KICKER.—You have chosen a correct title, which generally means one whose selfishness shuts his eyes to everything else, everything that does not in some way benefit him. Why, because you discovered something and kept it secret, should you desire to keep another who made the same discovery independently from using it? He has just the same right to the discovery as you, although, had you liked, the Government would have made a bargain with you. On condition of your so disclosing the secret as that any one could do the work, it would have given you the sole right to do it for a certain number of years; and, consequently, because you wanted to keep it from "the patent grabbers" it has become public property.

COOKE ANASTIGMATS are like no others. Just test one. Screw it on your camera and examine the definition at every part of the ground glass. Notice the volume of light due to the simple construction. Then expose a plate. You'll find the lens quicker than one made of six cemented glasses, and you'll get keener definition. We send lenses on trial through dealers, or direct, if necessary. Write for our new catalogue. It explains everything fairly.

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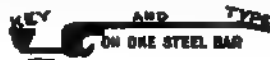
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